

國立勤益科技大學115學年度進修部四年制產攜2.0－產學攜手合作計畫
電機工程系電機智造整合人才專班學分計畫表
National Chin-Yi University of Technology Continuing Education Division
Curriculum for 2026 Department of Electrical Engineering Four-Year Bachelor Program of Electrical Engineering

114.10.28 系課程會議通過及114.11.12臨時系務會議通過
114.11.13 院課程會議審議通過
114.12.04 校課程委員會議及114.12.23 臨時教務會議審議通過

| 科目 | Courses | 上學期First Semester | | | 下學期Second Semester | | |
|--|--|-------------------|---------------|------------------|--------------------|---------------|------------------|
| | | 學分 Credit | 正課 Lecture | 實習 Internship | 學分 Credit | 正課 Lecture | 實習 Internship |
| 共同必修科目(24學分)General Required Courses(24credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| 微積分 | Calculus | 3 | 3 | 0 | | | |
| 實用英文（一） | Practical English (I) | 2 | 2 | 0 | | | |
| 體育（一） | Physical Education (I) | 0 | 2 | 0 | | | |
| 實用英文（二） | Practical English (II) | | | | 2 | 2 | 0 |
| 體育（二） | Physical Education (II) | | | | 0 | 2 | 0 |
| 第二學年Second Year | | | | | | | |
| 英文聽講 | English Listening and Speaking | 2 | 2 | 0 | | | |
| 應用國文（一） | Applied Chinese (I) | 3 | 3 | 0 | | | |
| 應用國文（二） | Applied Chinese (II) | | | | 3 | 3 | 0 |
| 第三學年Third Year | | | | | | | |
| 就業技巧與職場核心能力 | Employment， Workplace Skills and Core Competencies | 2 | 2 | 0 | | | |
| 藝術鑑賞 | Art Appreciation | 1 | 1 | 0 | | | |
| 音樂鑑賞 | Music Appreciation | 1 | 1 | 0 | | | |
| 終身學習與生涯規劃 | Lifelong Learning and Career Planning | | | | 2 | 2 | 0 |
| 英文閱讀 | English Reading | | | | 3 | 3 | 0 |
| 科目 | Courses | 上學期First Semester | | | 下學期Second Semester | | |
| | | 學分 Credit | 正課 Lecture | 實習 Internship | 學分 Credit | 正課 Lecture | 實習 Internship |
| 專業必修科目(56學分)Department Required Courses(56credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| 電路學（一） | Electric Circuit Analysis (I) | 3 | 3 | 0 | | | |
| 機電整合概論 | Introduction to Mechatronics | 3 | 3 | 0 | | | |
| 產業實務實習（一） | Industrial Practice Internship (I) | 2 | 0 | 4 | | | |
| 電路學（二） | Electric Circuit Analysis (II) | | | | 3 | 3 | 0 |
| 工程數學 | Engineering Mathematics | | | | 3 | 3 | 0 |
| 自動工程概論 | Introduction to Automatic Engineering | | | | 3 | 3 | 0 |
| 產業實務實習（二） | Industrial Practice Internship (II) | | | | 2 | 0 | 4 |
| 第二學年Second Year | | | | | | | |
| 自動控制 | Automatic Control | 3 | 3 | 0 | | | |
| 電機機械 | Electric Machinery | 3 | 3 | 0 | | | |
| 電子學 | Electronics | 3 | 3 | 0 | | | |
| 產業實務實習（三） | Industrial Practice Internship (III) | 2 | 0 | 4 | | | |
| 電子學實習 | Electronics Practice | | | | 1 | 0 | 3 |
| 電機機械實習 | Electric Machinery Practice | | | | 1 | 0 | 3 |
| 產業實務實習（四） | Industrial Practice Internship (IV) | | | | 2 | 0 | 4 |
| 第三學年Third Year | | | | | | | |
| 電力電子學 | Power Electronics | 3 | 3 | 0 | | | |
| 產業實務實習（五） | Industrial Practice Internship (V) | 2 | 0 | 4 | | | |
| 電力電子學實習 | Power Electronics Practice | | | | 1 | 0 | 3 |
| 產業實務實習（六） | Industrial Practice Internship (VI) | | | | 2 | 0 | 4 |
| 第四學年Fourth Year | | | | | | | |
| 電機控制 | Electric Drive Control | 3 | 3 | 0 | | | |
| 實務專題（一） | Project Study (I) | 3 | 0 | 6 | | | |
| 產業實務實習（七） | Industrial Practice Internship (VII) | 2 | 0 | 4 | | | |
| 實務專題（二） | Project Study (II) | | | | 3 | 0 | 6 |
| 電機控制實習 | Electric Drive Control Practice | | | | 1 | 0 | 3 |
| 產業實務實習（八） | Industrial Practice Internship (VIII) | | | | 2 | 0 | 4 |
| 科目 | Courses | 上學期First Semester | | | 下學期Second Semester | | |
| | | 學分 Credit | 正課 Lecture | 實習 Internship | 學分 Credit | 正課 Lecture | 實習 Internship |
| 專業選修科目Department Electives Courses | | | | | | | |
| 第一學年First Year | | | | | | | |
| 電腦輔助機械設計與實習 | Computer Aided Mechanical Design and Practice | 3 | 2 | 2 | | | |
| 套裝軟體應用及實習 | Package Software Application and Practice | 3 | 2 | 2 | | | |
| △PLC應用及實習 | PLC Application and Practice | 3 | 2 | 2 | | | |
| 電腦輔助機械製圖 | Computer Aided Mechanical Drawing | 3 | 3 | 0 | | | |
| △程式設計及實習 | Programming Design and Practice | | | | 3 | 2 | 2 |
| 機構學 | Mechanisms | | | | 3 | 3 | 0 |

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|--|--|-------------------|------------------------|------------------|-----------------------|---------------|------------------------|------------|-----------------------|------------|------------------------|------------|-----------------------|------------|------------------------|------------|
| 製造學 | Manufacturing | | | | | 3 | 3 | 0 | | | | | | | | |
| 數控機械應用與實習 | Computer Numerical Control (CNC) Application and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 材料力學 | Mechanics of Materials | | | | | 3 | 3 | 0 | | | | | | | | |
| 第二學年Second Year | | | | | | | | | | | | | | | | |
| 工具機設計與量測實習 | Machine Tool Design and Measurement Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 單晶片應用及實習 | Single-Chip Microcontroller Application and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 工業配線設計及實習 | Industrial Wiring Design and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 振動學 | Vibration | 3 | 3 | 0 | | | | | | | | | | | | |
| △人機介面設計及實習 | Human Computer Interface Design and Practice | 3 | 1 | 2 | | | | | | | | | | | | |
| 機械動力學 | Machinery Dynamics | | | | | 3 | 3 | 0 | | | | | | | | |
| 工具機控制器實務 | Machine Tool Controller Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 工業安全衛生 | Industrial Safety Hygiene | | | | | 3 | 3 | 0 | | | | | | | | |
| △Python程式設計及實習 | Python Programming and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 第三學年Third Year | | | | | | | | | | | | | | | | |
| 流體力學 | Fluid Mechanics | 3 | 3 | 0 | | | | | | | | | | | | |
| △圖控程式設計及實習 | Graphical Programming and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| △機電整合應用及實習 | Mechatronics Application and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 資料庫系統 | Database System | 3 | 3 | 0 | | | | | | | | | | | | |
| 控制系統設計及實習 | Control System Design and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 物聯網電子系統應用與設計 | IoT Electronic Systems Application and Design | 3 | 2 | 2 | | | | | | | | | | | | |
| 物聯網應用及實習 | IoT Applications and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 感測器應用及實習 | Sensors Application and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 有限元素分析 | Finite Element Analysis | | | | | 3 | 3 | 0 | | | | | | | | |
| 巨量資料分析 | Big Data Analysis | | | | | 3 | 3 | 0 | | | | | | | | |
| 智慧型機器人學 | Intelligent Robotics | | | | | 3 | 3 | 0 | | | | | | | | |
| 第四學年Fourth Year | | | | | | | | | | | | | | | | |
| 系統動態模擬及實習 | System Dynamic Simulation and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 微控制器產品設計實務 | Microcontroller Product Design Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 太陽能工程與實習 | Solar Energy Engineering and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| 數位影像處理及實習 | Digital Image Processing and Practice | 3 | 2 | 2 | | | | | | | | | | | | |
| △Arduino應用及實習 | Arduino Application and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| △微處理機及實習 | Microprocessor and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 電腦輔助電機設計及實習 | Computer Aided Design and Practice of Electrical Machinery | | | | | 3 | 2 | 2 | | | | | | | | |
| △數位信號處理及實習 | Digital Signal Processing and Practice | | | | | 3 | 2 | 2 | | | | | | | | |
| 電腦網路概論 | Introduction to Computer Network | | | | | 3 | 3 | 0 | | | | | | | | |
| 科目 | Courses | 上學期First Semester | | | 下學期Second Semester | | | | | | | | | | | |
| | | 學分 Credit | 正課 Lecture | 實習 Internship | 學分 Credit | 正課 Lecture | 實習 Internship | | | | | | | | | |
| 共同選修科目General Elective Courses | | | | | | | | | | | | | | | | |
| 第一學年First Year | | | | | | | | | | | | | | | | |
| 全民國防教育軍事訓練（一） | All-Out Defense Education Military Training (I) | 1 | 2 | 0 | | | | | | | | | | | | |
| 全民國防教育軍事訓練（二） | All-Out Defense Education Military Training (II) | | | | | 1 | 2 | 0 | | | | | | | | |
| 第二學年Second Year | | | | | | | | | | | | | | | | |
| 全民國防教育軍事訓練（三） | All-Out Defense Education Military Training (III) | 1 | 2 | 0 | | | | | | | | | | | | |
| 全民國防教育軍事訓練（四） | All-Out Defense Education Military Training (IV) | | | | | 1 | 2 | 0 | | | | | | | | |
| 第三學年Third Year | | | | | | | | | | | | | | | | |
| 全民國防教育軍事訓練（五） | All-Out Defense Education Military Training (V) | 1 | 2 | 0 | | | | | | | | | | | | |
| 學分/時數統計 Credit/Hour Total | 第一學年First Year | | | | 第二學年Second Year | | | | 第三學年Third Year | | | | 第四學年Fourth Year | | | |
| | 上學期 First Semester | | 下學期 Second Semester | | 上學期 First Semester | | 下學期 Second Semester | | 上學期 First Semester | | 下學期 Second Semester | | 上學期 First Semester | | 下學期 Second Semester | |
| | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour | 學分 Credit | 學時 Hour |
| 必修科目學分/時數 Required Courses Credit / Hour | 13 | 17 | 13 | 17 | 16 | 18 | 7 | 13 | 9 | 11 | 8 | 12 | 8 | 13 | 6 | 13 |
| 最低選修科目學分/時數 Minimum Electives Courses Credit / Hour | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 6 | 10 | 10 | 9 | 10 | 6 | 8 | 6 | 8 |
| 總學分數/時數累計 Credits / Hours Total | 16 | 20 | 16 | 20 | 22 | 24 | 13 | 19 | 19 | 21 | 17 | 22 | 14 | 21 | 12 | 21 |

備註Note:

(產攜-上銀-星期一到五晚上上課)

一、畢業至少應修滿 128 學分【必修 80 學分，選修至少 48 學分(其中至少需含本系專業選修 32 學分)】。

Students should complete at least 128 credits before graduation, including 80 required credits, 48 elective credits (elective credits should have at least 32 credits from department elective courses).

二、課程名稱前有標示「△」符號者，為「程式設計課程」。

Courses with a “△” refers to an application design course.

三、為因應法規變更、評鑑建議或政府計畫規定等外在因素，本系保有調整學分計畫之權利。若有修訂，將於學期開始前公告，並明確說明修訂內容、影響範圍及相關配套措施，以保障學生權益。

The department reserves the right to adjust the curriculum in response to external factors such as changes in regulations, suggestions of evaluation and accreditation, or government program regulations. If there are any revisions, will be announced before the start of the semester, and the revised content, scope of impact, and related supporting measures will be clearly stated to protect the rights and interests of students.