

國立勤益科技大學進修部四年制115學年度機械工程系學分計畫表

National Chin-Yi University of Technology Continuing Education Division
Curriculum for 2026 Four-Year Bachelor Program of Department of Mechanical Engineering

114.10.22 114學年度第1學期第1次系課程會議通過
 114.11.05 114學年度第1學期第2次系務會議通過
 114.11.20 114學年度第1學期第1次院課程會議通過
 114.12.04 校課程委員會會議及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(28學分)General Required Courses(28credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| 國文（一） | Chinese (I) | 3 | 3 | 0 | | | |
| 大一英文（一） | Freshman English (I) | 2 | 2 | 0 | | | |
| 英文聽講（一） | English Listening and Speaking (I) | 1 | 1 | 0 | | | |
| 體育（一） | Physical Education (I) | 0 | 2 | 0 | | | |
| 國文（二） | Chinese (II) | | | | 3 | 3 | 0 |
| 大一英文（二） | Freshman English (II) | | | | 2 | 2 | 0 |
| 英文聽講（二） | English Listening and Speaking (II) | | | | 1 | 1 | 0 |
| 體育（二） | Physical Education (II) | | | | 0 | 2 | 0 |
| 第二學年Second Year | | | | | | | |
| 憲法與民主（一） | Constitution and Democracy (I) | 2 | 2 | 0 | | | |
| 藝術鑑賞（一） | Art Appreciation (I) | 1 | 1 | 0 | | | |
| 音樂鑑賞（一） | Music Appreciation (I) | 1 | 1 | 0 | | | |
| 體育（三） | Physical Education (III) | 0 | 2 | 0 | | | |
| 憲法與民主（二） | Constitution and Democracy (II) | | | | 2 | 2 | 0 |
| 藝術鑑賞（二） | Art Appreciation (II) | | | | 1 | 1 | 0 |
| 音樂鑑賞（二） | Music Appreciation (II) | | | | 1 | 1 | 0 |
| 體育（四） | Physical Education (IV) | | | | 0 | 2 | 0 |
| 第三學年Third Year | | | | | | | |
| 歷史與文化（一） | History and Culture (I) | 2 | 2 | 0 | | | |
| 博雅通識課程 | Liberal Education Curriculums | 2 | 2 | 0 | | | |
| 歷史與文化（二） | History and Culture (II) | | | | 2 | 2 | 0 |
| 博雅通識課程 | Liberal Education Curriculums | | | | 2 | 2 | 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(66學分)Department Required Courses(66credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| 微積分（一） | Calculus (I) | 3 | 3 | 0 | | | |
| 程式語言 | Programming Language | 3 | 3 | 0 | | | |
| 工廠實務 | Factory Practice | 3 | 3 | 0 | | | |
| 電腦輔助機械製圖 | Computer Aided Mechanical Drawing | 3 | 3 | 0 | | | |
| 微積分（二） | Calculus (II) | | | | 3 | 3 | 0 |
| 靜力學 | Statics | | | | 3 | 3 | 0 |
| 材料科學與工程 | Materials Science and Engineering | | | | 3 | 3 | 0 |
| 精密製造實務 | Precision Manufacturing Practice | | | | 3 | 3 | 0 |
| 第二學年Second Year | | | | | | | |
| 工程數學（一） | Engineering Mathematics (I) | 3 | 3 | 0 | | | |
| 電機學 | Electrical Machinery | 3 | 3 | 0 | | | |
| 動力學（一） | Dynamics (I) | 3 | 3 | 0 | | | |
| 製造學 | Manufacturing Processes | 3 | 3 | 0 | | | |
| 機械工程實務（一） | Mechanical Engineering Practice (I) | 3 | 3 | 0 | | | |
| 工程數學（二） | Engineering Mathematics (II) | | | | 3 | 3 | 0 |
| 應用電子學（一） | Applied Electronics (I) | | | | 3 | 3 | 0 |
| 機構學 | Mechanism | | | | 3 | 3 | 0 |
| 材料力學（一） | Mechanics of Materials (I) | | | | 3 | 3 | 0 |
| 第三學年Third Year | | | | | | | |
| 機械設計（一） | Mechanical Design (I) | 3 | 3 | 0 | | | |
| 熱力學（一） | Thermodynamics (I) | 3 | 3 | 0 | | | |
| 自動控制 | Automatic Control | 3 | 3 | 0 | | | |
| 材料試驗實務 | Materials Testing Practice | 3 | 3 | 0 | | | |
| 流體力學（一） | Fluid Mechanics (I) | | | | 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 |
| 專業選修科目Department Electives Courses | | | | | | | |
| 第二學年Second Year | | | | | | | |
| 科技英文 | English for Science and Technology | | | | 3 | 3 | 0 |
| 夾治具設計 | Jig and Fixture Design | | | | 3 | 3 | 0 |
| AI智慧機械概論 | Introduction to Intelligent Machinery | | | | 3 | 3 | 0 |

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|-----------------|---|---|---|---|---|---|---|
| 3D參數化機械設計 | 3D Parametric Mechanical Design | | | | 3 | 3 | 0 |
| 奈米材料概論 | Introduction to Nanomaterials | | | | 3 | 3 | 0 |
| 物理學 | Physics | | | | 3 | 3 | 0 |
| 真空技術 | Vacuum Technology | | | | 3 | 3 | 0 |
| 工程材料與應用 | Engineering Material and Applications | | | | 3 | 3 | 0 |
| 數位邏輯 | Digital logic | | | | 3 | 3 | 0 |
| 衝壓模設計 | Stamping Die Design | | | | 3 | 3 | 0 |
| 銲接學 | Welding | | | | 3 | 3 | 0 |
| 鑄造學 | Foundry | | | | 3 | 3 | 0 |
| CAE概論 | Introduction to CAE Analysis | | | | 3 | 3 | 0 |
| 第三學年Third Year | | | | | | | |
| 訊號與系統 | Signals and Systems | 3 | 3 | 0 | | | |
| 應用熱傳學 | Applied Heat Transfer | 3 | 3 | 0 | | | |
| 電腦輔助工程分析（一） | Computer Aided Engineering Analysis (I) | 3 | 3 | 0 | | | |
| 機器人控制實務 | Robot Control Practice | 3 | 3 | 0 | | | |
| 再生能源技術 | Renewable Energy | 3 | 3 | 0 | | | |
| 材料力學（二） | Mechanics of Materials (II) | 3 | 3 | 0 | | | |
| 數值分析 | Numerical Analysis | 3 | 3 | 0 | | | |
| 有限元素分析 | Finite Element Analysis | 3 | 3 | 0 | | | |
| ●精密加工技術 | Precision Machining | 3 | 3 | 0 | | | |
| 快速原型加工 | Rapid Prototyping Technology | 3 | 3 | 0 | | | |
| 切削刀具學 | Tooling for Metal Cutting | 3 | 3 | 0 | | | |
| △C程式語言設計 | Computer Programming C++ Language | 3 | 3 | 0 | | | |
| 塑膠材料 | Plastic Materials | 3 | 3 | 0 | | | |
| 電腦輔助製造 | Computer Aided Manufacturing | 3 | 3 | 0 | | | |
| △LabVIEW程式設計與應用 | LabVIEW Programming and Application | 3 | 3 | 0 | | | |
| 半導體製程 | Semiconductor Processing Technology | 3 | 3 | 0 | | | |
| 高等工程數學 | Advanced Engineering Mathematics | 3 | 3 | 0 | | | |
| 創意性機構設計 | Creative Mechanism Design | | | | 3 | 3 | 0 |
| 電腦輔助產品設計 | Computer Aided Product Design | | | | 3 | 3 | 0 |
| 工具機設計與量測 | Machine Tool Design and Measurement | | | | 3 | 3 | 0 |
| 逆向工程 | Reverse Engineering | | | | 3 | 3 | 0 |
| 精密鑄造 | Precision Casting | | | | 3 | 3 | 0 |
| 熱處理 | Heat Treatment | | | | 3 | 3 | 0 |
| 陶瓷材料 | Ceramic Materials | | | | 3 | 3 | 0 |
| 動力學（二） | Dynamics (II) | | | | 3 | 3 | 0 |
| 工具機結構分析 | Machine Tool Structural Analysis | | | | 3 | 3 | 0 |
| 電腦整合製造 | Computer Integrated Manufacturing | | | | 3 | 3 | 0 |
| 塑膠模具設計 | Plastics Mold Design | | | | 3 | 3 | 0 |
| 五軸加工技術 | 5-Axis Machine Tool Technology and Application | | | | 3 | 3 | 0 |
| 薄膜材料與應用 | Thin Film Materials and Applications | | | | 3 | 3 | 0 |
| PC Based控制 | PC Based Control Interface Techniques | | | | 3 | 3 | 0 |
| 微控制器 | Microcontroller | | | | 3 | 3 | 0 |
| 數位IC實務 | Digital IC Practices | | | | 3 | 3 | 0 |
| 可靠度工程 | Introduction to Reliability Engineering | | | | 3 | 3 | 0 |
| 線性代數 | Linear Algebra | | | | 3 | 3 | 0 |
| 微成形概論 | Introduction to Microforming | | | | 3 | 3 | 0 |
| MATLAB 軟體之工程應用 | Applications of MATLAB on Engineering | | | | 3 | 3 | 0 |
| △Java程式語言設計 | Java Programming | | | | 3 | 3 | 0 |
| 機械性質檢測原理與分析 | Mechanical Property Testing Principles and Analysis | | | | 3 | 3 | 0 |
| 緊固件學理與檢測 | Fastener Theory and Testing | | | | 3 | 3 | 0 |
| 淨零概論 | Introduction to Net Zero | | | | 3 | 3 | 0 |
| 生醫材料概論 | Introduction to Biological Materials | | | | 3 | 3 | 0 |
| 鋰電池設計與開發 | Design and Development of Lithium-ion | | | | 3 | 3 | 0 |
| 第四學年Fourth Year | | | | | | | |
| 機械工程實務（二） | Mechanical Engineering Practice (II) | 3 | 3 | 0 | | | |
| 微機電系統 | Microelectromechanical Systems (MEMS) | 3 | 3 | 0 | | | |
| 振動學 | Vibration | 3 | 3 | 0 | | | |
| 電腦輔助工程分析（二） | Computer Aided Engineering Analysis (II) | 3 | 3 | 0 | | | |
| 發明與專利 | Invention and Patent | 3 | 3 | 0 | | | |
| 液壓系統設計 | Hydraulic System Design | 3 | 3 | 0 | | | |
| 太陽能概論 | Introduction to Solar Energy Engineering | 3 | 3 | 0 | | | |
| 三維金屬積層設計 | 3D Metal Additive Manufacturing Design | 3 | 3 | 0 | | | |
| 粉末冶金 | Powder Metallurgy | 3 | 3 | 0 | | | |
| 非傳統加工 | Non-Traditional Machining Processes | 3 | 3 | 0 | | | |
| AI智慧製造技術 | Intelligent Manufacturing Technology | 3 | 3 | 0 | | | |
| 非破壞檢驗 | Non-Destructive Testing | 3 | 3 | 0 | | | |
| 工程統計學 | Engineering Statistics | 3 | 3 | 0 | | | |
| 自動化生產系統 | Automatic Production Systems | 3 | 3 | 0 | | | |

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|--|---|-------------------|------------------------|------------------|-----------------------|---------------|------------------------|------------|-----------------------|------------|------------------------|------------|-----------------------|------------|------------------------|------------|
| 流體機械 | Fluid Machinery | 3 | 3 | 0 | | | | | | | | | | | | |
| 造型藝術與創新設計 | Formative Arts and Innovation Design | 3 | 3 | 0 | | | | | | | | | | | | |
| AI智慧機械聯網整合技術 | Intelligent Machine Networking Integration Technology | 3 | 3 | 0 | | | | | | | | | | | | |
| 工具機控制器實務 | Machine Tool Controller Practice | 3 | 3 | 0 | | | | | | | | | | | | |
| 防蝕工程 | Anti-corrosion Engineering | | | | 3 | 3 | 0 | | | | | | | | | |
| 醫工設備概論 | Introduction to Equipment of Biomedical Engineering | | | | 3 | 3 | 0 | | | | | | | | | |
| 汽車工程 | Automotive Engineering | | | | 3 | 3 | 0 | | | | | | | | | |
| 半導體製程設備 | Semiconductor Equipment | | | | 3 | 3 | 0 | | | | | | | | | |
| 綠色能源科技 | Green Energy Technology | | | | 3 | 3 | 0 | | | | | | | | | |
| 近代物理學 | Modern Physics | | | | 3 | 3 | 0 | | | | | | | | | |
| 工程倫理 | Engineering Ethics | | | | 3 | 3 | 0 | | | | | | | | | |
| 機械系統設計 | Mechanical System Design | | | | 3 | 3 | 0 | | | | | | | | | |
| 複合材料力學 | Mechanics of Composite Material | | | | 3 | 3 | 0 | | | | | | | | | |
| 科技論文寫作 | Technical Thesis Writing | | | | 3 | 3 | 0 | | | | | | | | | |
| 數位控制 | Digital Control | | | | 3 | 3 | 0 | | | | | | | | | |
| 生醫力學概論 | Introduction to Biomedical Mechanics | | | | 3 | 3 | 0 | | | | | | | | | |
| 航空產業概論 | Introduction to Aviation Industry | | | | 3 | 3 | 0 | | | | | | | | | |
| 彈塑性力學 | Mechanics of Elasticity and Plasticity | | | | 3 | 3 | 0 | | | | | | | | | |
| 微系統製造技術 | Microsystem Manufacturing Technology | | | | 3 | 3 | 0 | | | | | | | | | |
| 精密模具設計與加工 | Precision Mold Design and Manufacturing | | | | 3 | 3 | 0 | | | | | | | | | |
| 機械工程實務（三） | Mechanical Engineering Practice (III) | | | | 3 | 3 | 0 | | | | | | | | | |
| 工具機組裝技術 | Machine Tools Assembly Technology | | | | 3 | 3 | 0 | | | | | | | | | |
| 電動車概論 | Introduction to Electric Vehicle | | | | 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 | | | | | | | | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | 6 | 6 | 0 | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | | | | 6 | 6 | 0 | | | | | | | | | |
| 第二學年Second Year | | | | | | | | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | 6 | 6 | 0 | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | | | | 6 | 6 | 0 | | | | | | | | | |
| 第三學年Third Year | | | | | | | | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | 6 | 6 | 0 | | | | | | | | | | | | |
| 體育選修 | Physical Education Elective | 1 | 2 | 0 | | | | | | | | | | | | |
| 全民國防教育軍事訓練（五） | All-Out Defense Education Military Training (V) | 1 | 2 | 0 | | | | | | | | | | | | |
| 體育選修 | Physical Education Elective | | | | 1 | 2 | 0 | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | | | | 6 | 6 | 0 | | | | | | | | | |
| 第四學年Fourth Year | | | | | | | | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | 6 | 6 | 0 | | | | | | | | | | | | |
| 體育選修 | Physical Education Elective | 1 | 2 | 0 | | | | | | | | | | | | |
| 體育選修 | Physical Education Elective | | | | 1 | 2 | 0 | | | | | | | | | |
| 外語菁英課程 | Foreign Language Elite Courses | | | | 6 | 6 | 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 | 18 | 20 | 18 | 20 | 19 | 21 | 16 | 18 | 16 | 16 | 7 | 7 | 0 | 0 | 0 | 0 |
| 最低選修科目學分/時數 Minimum Electives Courses Credit / Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 9 | 9 | 12 | 12 | 10 | 10 |
| 總學分數/時數累計 Credits / Hours Total | 18 | 20 | 18 | 20 | 19 | 21 | 16 | 18 | 19 | 19 | 16 | 16 | 12 | 12 | 10 | 10 |

備註Note:

- 一、 畢業至少應修滿 128 學分【必修 94 學分，選修至少 34 學分(其中至少需含本系專業選修 23 學分)】。
Students should complete at least 128 credits before graduation, including 94 required credits, 34 elective credits (elective credits should have at least 23 credits from department elective courses).
- 二、 博雅通識課程三大領域中，應修習二門不同領域課程，學分總計至少4學分。
Among the 3 core areas of liberal education curriculum, students should take 4 or more credits in 2 different areas.
- 三、 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.
- 四、 課程名稱前有標示「●」符號者，為「職能專業課程」。
Courses with a "●" refer to a professional competence course.
- 五、 課程名稱前有標示「AI」符號者，為「人工智慧相關課程」。
Courses with an "AI" refer to an artificial intelligence related course.
- 六、 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.