

國立勤益科技大學115學年度進修部四年制產攜2.0－產學訓模式
機械工程系工具機與精密模具設計製造專班學分計畫表

National Chin-Yi University of Technology Continuing Education Division
Curriculum for 2026 Department of Mechanical Engineering Four-Year Bachelor Program of Design and
Manufacturing of Machine Tools and Precision Molds

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 | | | | | | | |
| 國文（一） | Chinese (I) | 3 | 3 | 0 | | | |
| 大一英文（一） | Freshman English (I) | 3 | 3 | 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) | | | | 3 | 3 | 0 |
| 體育（二） | Physical Education (II) | | | | 0 | 2 | 0 |
| 第二學年Second Year | | | | | | | |
| 體育（三） | Physical Education (III) | 0 | 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（四） | Physical Education (IV) | | | | 0 | 2 | 0 |
| 第三學年Third Year | | | | | | | |
| 科技英文（一） | English for Science and Technology (I) | 3 | 3 | 0 | | | |
| 科技英文（二） | English for Science and Technology (II) | | | | 3 | 3 | 0 |
| 第四學年Fourth Year | | | | | | | |
| 博雅通識課程 | Liberal Education Curriculums | 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(77學分)Department Required Courses(77credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| *機械工作法 | Mechanical Method | 2 | 1 | 2 | | | |
| *立式綜合加工機技術概論 | Introduction to Vertical Comprehensive Processing Machine Technology | 2 | 1 | 2 | | | |
| *工具機實習 | Machine Tool Practice | 2 | 0 | 6 | | | |
| *電腦輔助繪圖實習 | Computer Aided Drafting and Practice | 1 | 0 | 3 | | | |
| *模具設計加工法 | Mold Design and Processing Method | 3 | 3 | 0 | | | |
| *圖學與製圖實習 | Practice of Graphics and Cartography | 1 | 0 | 3 | | | |
| 材料科學與工程 | Material Science and Engineering | 3 | 3 | 0 | | | |
| *電腦輔助模具設計概論 | Introduction to Computer Aided Mold Design | | | | 2 | 1 | 2 |
| 應用數學 | Applied Mathematics | | | | 3 | 3 | 0 |
| 第二學年Second Year | | | | | | | |
| 微積分（一） | Calculus (I) | 3 | 3 | 0 | | | |
| 靜力學 | Statics | 3 | 3 | 0 | | | |
| △程式語言 | Programming Language | 3 | 3 | 0 | | | |
| 材料試驗 | Experiment of Engineering Material | 1 | 0 | 3 | | | |
| 產業實務實習（一） | Industry Internship (I) | 3 | 0 | 6 | | | |
| 微積分（二） | Calculus (II) | | | | 3 | 3 | 0 |
| 動力學 | Dynamics | | | | 3 | 3 | 0 |
| 機構學 | Mechanism | | | | 3 | 3 | 0 |
| 製造學 | Manufacturing Processes | | | | 3 | 3 | 0 |
| 產業實務實習（二） | Industry Internship (II) | | | | 3 | 0 | 6 |
| 第三學年Third Year | | | | | | | |
| 材料力學 | Mechanics of Materials | 3 | 3 | 0 | | | |
| 切削刀具學 | Tooling for Metal Cutting | 3 | 3 | 0 | | | |
| 產業實務實習（三） | Industry Internship (III) | 3 | 0 | 6 | | | |
| 機械設計 | Mechanical Design | | | | 3 | 3 | 0 |
| 智慧機械概論 | Introduction to Intelligent Machinery | | | | 3 | 3 | 0 |
| 產業實務實習（四） | Industry Internship (IV) | | | | 3 | 0 | 6 |
| 第四學年Fourth Year | | | | | | | |
| 精密量具與實習 | Precision Measuring and Practice | 3 | 2 | 2 | | | |
| 產業實務實習（五） | Industry Internship (V) | 3 | 0 | 6 | | | |
| 工具機設計 | Machine Tool Design | | | | 3 | 3 | 0 |
| 產業實務實習（六） | Industry Internship (VI) | | | | 3 | 0 | 6 |
| 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 | | | | | | | | | | | | | | | | | |
| *沖模設計學 | Die Design | | | | | 2 | 1 | 2 | | | | | | | | | |
| *塑模設計學 | Design of Plastic Mold | | | | | 2 | 1 | 2 | | | | | | | | | |
| *CAD/CAM概論 | Introduction to CAD/CAM | | | | | 3 | 3 | 0 | | | | | | | | | |
| *CAD/CAM實習 | CAD/CAM Practice | | | | | 1 | 0 | 3 | | | | | | | | | |
| *模具應用實習 | Mold Application Practice | | | | | 2 | 0 | 6 | | | | | | | | | |
| *模具製作實習 | Mold Making Practice | | | | | 1 | 0 | 3 | | | | | | | | | |
| *電腦輔助模具設計實習 | Computer Aided Mold Design and Practice | | | | | 1 | 0 | 3 | | | | | | | | | |
| *數控機械應用與實習 | CNC Machine Application and Practice | | | | | 3 | 1 | 4 | | | | | | | | | |
| 第三學年Third Year | | | | | | | | | | | | | | | | | |
| 電機學與實習 | Mectromechanical and Practice | 3 | 2 | 2 | | | | | | | | | | | | | |
| 非傳統加工 | Non-Traditional Machining Processes | 3 | 3 | 0 | | | | | | | | | | | | | |
| 應用電子學與實習 | Applied Electronics and Practice | | | | 3 | 2 | 2 | | | | | | | | | | |
| 工程倫理 | Engineering Ethics | | | | 3 | 3 | 0 | | | | | | | | | | |
| 第四學年Fourth Year | | | | | | | | | | | | | | | | | |
| 機電整合與實習 | Mechatronics Theory and Practice | 3 | 2 | 2 | | | | | | | | | | | | | |
| 夾治具設計 | Jig and Fixture Design | 3 | 3 | 0 | | | | | | | | | | | | | |
| 應用熱傳學 | | 3 | 3 | 0 | | | | | | | | | | | | | |
| 製程規劃 | Manufacturing Process Planning | | | | 3 | 3 | 0 | | | | | | | | | | |
| 電腦輔助工程分析 | Computer Aided Engineering Analysis | | | | 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 | 學分 Credit | 正課 Lecture | 實習 Internship | 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 | 20 | 32 | 11 | 14 | 14 | 21 | 16 | 21 | 12 | 15 | 12 | 15 | 8 | 12 | 8 | 11 | |
| 最低選修科目學分/時數 Minimum Electives Courses Credit / Hour | 0 | 0 | 15 | 29 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 總學分數/時數累計 Credits / Hours Total | 20 | 32 | 26 | 43 | 14 | 21 | 16 | 21 | 15 | 18 | 15 | 18 | 11 | 15 | 11 | 14 | |

- 備註Note:
- 畢業至少應修滿 128 學分【必修 101 學分，選修至少 27 學分(其中至少需含本系專業選修 27 學分)】。
Students should complete at least 128 credits before graduation, including 101 required credits, 27 elective credits (elective credits should have at least 27 credits from department elective courses).
 - 通識教育學院所開設之「博雅通識課程」學分數(時)為2學分2學時或3學分3學時，經 101 學年度第二學期校課程委員會會議通過。
Liberal Arts General Study courses provided by College of General Education, are divided into 2 hours course with 2 credits or 3 hours course with 3 credits, ratified by the School Course Committee in 2012.
 - 第一學年必須選讀*職訓中心基礎訓練課程28學分。
 - 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.
 - 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.
 - 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.
 - 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.