

國立勤益科技大學113學年度進修部碩士在職專班電機工程系學分計畫表

National Chin-Yi University of Technology Continuing Education Division
Curriculum for 2024 In-Service Master Program Department of Electrical Engineering

112.11.02. 系課程會議通過
112.11.08. 系務會議通過
112.11.22. 院課程委員會會議審議通過
112.12.07. 校課程委員會會議及112.12.21. 臨時教務會議審議通過
113.12.05. 校課程委員會會議及113.12.24. 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(10學分)General Required Courses(10credits hours) | | | | | | | |
| 第一學年First Year | | | | | | | |
| 專題研討(一) | Seminar (I) | 2 | 2 | 0 | | | |
| 專題研討(二) | Seminar (II) | | | | 2 | 2 | |
| 第二學年Second Year | | | | | | | |
| 論文(一) | Thesis (I) | 3 | 3 | 0 | | | |
| 論文(二) | Thesis (II) | | | | 3 | 3 | |
| 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 | | | | | | | |
| 綠色能源系統 | Green Energy System | 3 | 3 | 0 | | | |
| 高等電力電子學 | Advanced Power Electronics | 3 | 3 | 0 | | | |
| 模糊控制 | Fuzzy Control | 3 | 3 | 0 | | | |
| 高等電機理論 | Advanced Electric Machinery Theory | 3 | 3 | 0 | | | |
| 系統理論 | System Theory | 3 | 3 | 0 | | | |
| 永磁無刷馬達 | Permanent Brushless Magnet Motor | 3 | 3 | 0 | | | |
| 電力品質專論 | Advanced Topics in Power Quality | 3 | 3 | 0 | | | |
| 太陽光電發電系統設計 | Photovoltaic Power Generation Systems Design | 3 | 3 | 0 | | | |
| 高等控制專論 | Advanced Topics in Control System | 3 | 3 | 0 | | | |
| 高等控制系統 | Advanced Control System | 3 | 3 | 0 | | | |
| 高等系統動態模擬 | Advanced System Dynamic Simulation | 3 | 3 | 0 | | | |
| 高等數位影像處理 | Advanced Digital Image Processing | 3 | 3 | 0 | | | |
| 物聯網與機器學習應用 | IoT and Machine Learning Application | 3 | 3 | 0 | | | |
| 類小腦神經網路應用 | CMAC Neural Network Application | 3 | 3 | 0 | | | |
| 電磁干擾與防治 | Electromagnetic Interference and Protection | 3 | 3 | 0 | | | |
| 最佳化電機設計 | Optimization Electrical Machine Design | | | | 3 | 3 | |
| 類神經網路應用 | Neural Network and Application | | | | 3 | 3 | |
| 英文論文寫作 | English Thesis Writing | | | | 3 | 3 | |
| 可拓方法 | Extension Method | | | | 3 | 3 | |
| 先進電能儲存技術 | Advanced Energy Storage Technology | | | | 3 | 3 | |
| 氫能與燃料電池技術 | Hydrogen and Fuel Cell Technology | | | | 3 | 3 | |
| 電力系統分析與控制 | Power System Analysis and Control | | | | 3 | 3 | |
| 高等電機控制 | Advanced Electric Drive Control | | | | 3 | 3 | |
| 第二學年Second Year | | | | | | | |
| 電池管理系統 | Battery Management System | 3 | 3 | 0 | | | |
| 高等實驗設計 | Advanced Design of Experiments | 3 | 3 | 0 | | | |
| 電力系統穩定度 | Power System Stability | 3 | 3 | 0 | | | |
| 局部放電檢測技術 | Partial Discharge Detection Technology | 3 | 3 | 0 | | | |
| 小波轉換及應用 | Wavelet Transform and Application | 3 | 3 | 0 | | | |
| DSP於驅動器應用專論 | Advanced Topics in DSP Drivers | 3 | 3 | 0 | | | |
| 高科技專利取得與攻防 | High Technology Patent Application and Protection | 3 | 3 | 0 | | | |
| 分散式發電系統動態分析 | Dynamic Analysis of Distributed Power Generation System | | | | 3 | 3 | |
| 新暨再生能源發電效益評估 | Appraisal Criteria for New and Renewable Energy Power Generation | | | | 3 | 3 | |
| 最佳控制 | Optimization Control | | | | 3 | 3 | |
| 強健控制理論及應用 | Robust Control Theory and Application | | | | 3 | 3 | |
| 切換式電源供應器設計 | Switching Power Supply Design | | | | 3 | 3 | |
| 智慧整合感控系統 | Intelligent Cyber-Physical System | | | | 3 | 3 | |
| 電能監控系統 | Power SCADA System | | | | 3 | 3 | |
| 數位影像處理 | Digital Image Processing | | | | 3 | 3 | |
| 高等系統動態模擬 | Advanced System Dynamic Simulation | | | | 3 | 3 | |

備註Note:

- 一、 畢業至少應修滿34學分【必修10學分(含論文6學分)，選修至少24學分】，系內專業選修不得低於18學分。
Students should complete at least 34 credits before graduation including 10 required credits (containing 6 credits for Thesis) and 24 elective credits (at least 18 professional elective credits).
- 二、 研究生必須通過碩士班論文口試，方准予畢業。
Graduate students are only qualified for graduation after passing the thesis oral examination of the master's program and will be awarded with the master's degree according to law by the time of graduation.
- 三、 學生應於申請學位考試前至「教育部臺灣學術倫理教育資源中心」網路平臺完成學術研究倫理教育課程，至少6小時課程。
Students need to complete the academic research ethics education course for at least 6 hours before the final defence application.
- 四、 實際開課狀況需依當學期、依各科目授課進度與老師可配合授課情形安排，本系歷年開課，請至本校「校務行政網路系統-學生篇」查詢。
The actual commencement of classes will be arranged based on the current semester situation, the progress of each subject's curriculum, and the availability of teachers for instruction. Information about courses offered in previous years for this department can be found by checking the 'Student Information Management System' on our school's website.
- 五、 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.
- 六、 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.
- 七、 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.
- 八、 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.