

國立勤益科技大學 114 學年度 工業工程與管理系 碩士班學分計畫表
National Chin-Yi University of Technology

Curriculum Planning of 2025 Master's Degree in Department of Industrial Engineering and Management

113.10.23 系課程委員會
113.10.30 系務會議審議通過
113.11.19 院課程會議審議通過
113.12.5 校課程委員會及 113.12.24 臨時教務會議審議通過
114.3.5 系課程委員會及 114.4.10 系務會議審議修訂通過
114.5.6 院課程會議審議修訂通過
114.5.20 校課程委員會及 114.6.5 臨時教務會議審議修訂通過

| 科目 | Subjects | 上學期 First Semester | | 下學期 Second Semester | |
|---|---|-----------------------|------------|------------------------|------------|
| | | 學分 Credits | 學時 Hour | 學分 Credits | 學時 Hour |
| 必修科目(8 學分) Required Courses (8credits hours) | | | | | |
| 第一學年 First Year | | | | | |
| 書報討論 | Seminar | 1 | 2 | 1 | 2 |
| 第二學年 Second Year | | | | | |
| 論文 | Papers | 3 | 3 | 3 | 3 |
| 專業選修科目 Professional Electives Courses | | | | | |
| 第一學年 First Year | | | | | |
| 基礎選修課程 (至少選修 3 學分) Fundamental Electives Courses (at least 3 credits should be completed in Fundamental Electives) | | | | | |
| 計算機演算法 | Computer Algorithms | 3 | 3 | | |
| 高等作業研究 | Advanced Operations Research | 3 | 3 | | |
| 類神經網路 | Neural Network Design | 3 | 3 | | |
| 高等工程經濟 | Engineering Economy | 3 | 3 | | |
| 最佳化演算法 | Optimization Algorithms | 3 | 3 | | |
| 高等統計學 | Advanced Statistics | 3 | 3 | | |
| 多變量分析 | Multivariate Analysis | | | 3 | 3 |
| 資料探勘技術 | Data Mining Techniques and | | | 3 | 3 |
| 實驗設計 | Design of Experiments | | | 3 | 3 |
| 進化式演算法 | Evolutionary Algorithms | | | 3 | 3 |
| 進階選修課程 Advanced Electives Courses | | | | | |
| 科技管理 | Technology of Management | 3 | 3 | | |
| 自動檢測系統 | Automatic Inspection System | 3 | 3 | | |
| 品質工程 | Quality Engineering | 3 | 3 | | |
| 高等人因工程 | Advanced Human Factors | 3 | 3 | | |
| 國際品質保證 | International Quality Assurance | 3 | 3 | | |
| 安全工程 | Safety Engineering | 3 | 3 | | |
| 生產規劃與排程 | Production Planning & Scheduling | 3 | 3 | | |
| 創業與創新 | Entrepreneurship and Innovation | 3 | 3 | | |
| 全球運籌管理 | Global Logistics Management | 3 | 3 | | |
| 電腦整合製造 | Computer-Integrated Manufacturing | 3 | 3 | | |
| 產業電子化專題 | Special Topics on E-business | 3 | 3 | | |
| 多目標規劃 | Multi-Objective Optimization | 3 | 3 | | |
| 企業策略與競爭分析 | Strategic and Competitive Analysis for Enterprise | 3 | 3 | | |
| 限制理論實務與應用 | Theory of Constraints Practice and Application | 3 | 3 | | |
| 高等生產管理 | Advanced Operations Management | 3 | 3 | | |
| 管理經濟 | Managerial Economics | 3 | 3 | | |
| 研究技巧 | Research Techniques | 3 | 3 | | |
| 人類訊息處理 | Human Information Processing | 3 | 3 | | |
| 協同商務 | Collaborative Business | 3 | 3 | | |
| 財務管理 | Financial Management | 3 | 3 | | |
| 深度學習 | Deep Learning | 3 | 3 | | |
| 高等品質管理 | Advanced Quality Management | | | 3 | 3 |
| 創新管理與應用 | Innovation Management and Application | | | 3 | 3 |
| 績效評估方法 | Performance Evaluation Method | | | 3 | 3 |
| 經營診斷與管理 | Business Diagnosis | | | 3 | 3 |
| 高等統計製程管制 | Advanced Statistics Process Control | | | 3 | 3 |
| 人機介面 | Human-Machine Interaction | | | 3 | 3 |
| 全面品質管理 | Total Quality Management | | | 3 | 3 |
| 風險危害評估 | Risk and Hazard Assessment | | | 3 | 3 |
| 專利與創新發明 | Patent and Invention Innovation | | | 3 | 3 |
| 知識管理 | Special Topics of Knowledge | | | 3 | 3 |
| 企業資源規劃 | Enterprise Resource Planning | | | 3 | 3 |
| 系統模擬 | System Simulation | | | 3 | 3 |

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| 系統性創新方法 | Systematic Innovation | | | 3 | 3 |
| 供應鏈管理 | Supply Chain Management | | | 3 | 3 |
| 先進產業科技 | Advanced Industry Technology | | | 3 | 3 |
| 電腦圖學理論與應用 | Computer Graph Theory and Application | | | 3 | 3 |
| 投資管理 | Investment Management | | | 3 | 3 |
| 模糊決策分析 | Fuzzy Analytic Hierarchy Process | | | 3 | 3 |
| 智慧製造與管理 | Information Technology and Corporate Strategy | | | 3 | 3 |
| 精實生產系統 | Lean Production System | | | 3 | 3 |
| 獨立研究 | Independent Study | | | 3 | 3 |
| 商務企劃管理 | Business Planning Management | | | 3 | 3 |
| 人因測試與評估 | Ergonomic Testing and Evaluation | | | 3 | 3 |
| 溫室氣體盤查管理實務 | Greenhouse Gas Verify Management Practice | | | 3 | 3 |
| 第二學年 Second Year | | | | | |
| 基礎選修課程 Fundamental Electives Courses | | | | | |
| 校外實務研究(暑期) | Cooperative Education and Research in Practice (Summer) | 3 | 3 | | |
| 進階選修課程 Advanced Electives Courses | | | | | |
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備註 Note:

- 一、畢業至少應修 38 學分：必修 8 學分(含論文 6 學分、書報討論 2 學分)，選修 30 學分(專業選修至少 21 學分)。
Before graduation, each student should complete at least 38 credits, including 8 required credits (Thesis 6 credits and Seminar 2 credits) and 30 elective credits (at least 21 credits should be completed in department elective courses).
- 二、基礎課程選修科目至少選修一門(3 學分)。
At least 3 credits should be completed in fundamental elective courses.
- 三、非工業工程與管理類報考之新生須於大學部補修生產管理或工業工程與管理導論任一科，及格標準分數為 70 分，但不列入畢業學分內。
Freshmen who apply for non-industrial engineering and management must apply for reimbursement in the Department of Production Management or Introduction to Industrial Engineering and Management. The passing standard score is 70 but not included in the graduation credit.
- 四、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.
- 五、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.