# 國立勤益科技大學 114 學年度智慧製造與資訊應用國際學程碩士班 學分計畫表
# Curriculum Planning for 2025 International Master program in Smart Manufacturing and Applied Information Science

113.10.29 碩士學位學程課程會議審議通過
113.11.07 碩士學位學程所務會議審議通過
113.11.19 院課程審議通過
113.12.5.校課程委員會議及 113.12.24.臨時教務會議審議通過

| 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) Compulsory subjects (8 credits) | | | | | |
| **第一學年 First Year** | | | | | |
| 書報討論(一) | Seminar (I) | 1 | 2 | | |
| 書報討論(二) | Seminar (II) | | | 1 | 2 |
| **第二學年 Second Year** | | | | | |
| 論文 | Thesis | 3 | 3 | 3 | 3 |
| **科目** | **Subjects** | | | **學分 Credits** | **學時 Hour** |
| 專業選修 (30 學分) Professional elective subjects (30 credits) | | | | | |
| 智慧製造領域 (Field of Smart Manufacturing) | | | | | |
| 電腦輔助設計與製造 | Computer Aided Design and Manufacturing | 3 | 3 | | |
| 製造系統模擬 | Manufacturing System Simulation | 3 | 3 | | |
| *製程能力分析 | Process Capability Analysis and Application | 3 | 3 | | |
| 智慧物流 | Smart Logistic | 3 | 3 | | |
| 精實生產 | Lean Production | 3 | 3 | | |
| *高等生產管理 | Advanced Production Management | 3 | 3 | | |
| *高等作業研究 | Advanced Operations Research | 3 | 3 | | |
| *自動檢測系統 | Automatic Inspection System | 3 | 3 | | |
| 進階 ERP 模組實務 | Advanced ERP Module Practice | 3 | 3 | | |
| *實驗設計 | Design of Experiment | | | 3 | 3 |
| 模糊決策分析 | Fuzzy Analytic Hierarchy Process | | | 3 | 3 |
| *高等統計品質管制 | Advanced Statistical Quality Control | | | 3 | 3 |
| *專案管理 | Project Management | | | 3 | 3 |
| 全面品質管理 | Total Quality Management | | | 3 | 3 |
| *科技英文 | English for Science and Technology | | | 3 | 3 |
| 多準則決策分析 | Multiple Criteria Decision Making | | | 3 | 3 |
| 大數據與數據科學領域 (Field of Big data and Data Science) | | | | | |
| 類神經網路 | Neural Network | 3 | 3 | | |
| *資料探勘 | Data Mining | 3 | 3 | | |
| 人工智慧導論 | Introduction of Artificial Intelligence | 3 | 3 | | |
| 統計分析與資料科學 | Statistical Analysis and Data Science | 3 | 3 | | |
| *機器學習 | Machine Learning | 3 | 3 | | |
| *物聯網應用與實務 | Application and Practice of IoT | | | 3 | 3 |
| *巨量資料分析 | Big Data Analytics | | | 3 | 3 |
| *進化式演算法 | Evolutionary Algorithms | | | 3 | 3 |
| *多媒體與科技應用 | Multimedia Technology Applications | | | 3 | 3 |
| *網路可靠度 | Network Reliability | | | 3 | 3 |
| 資訊系統開發與管理 | Development and Management of Information System | | | 3 | 3 |
| 研究方法 | Research Method | | | 3 | 3 |

**備註**

1. 畢業至少應修 38 學分【書報討論 2 學分、碩士論文 6 學分、選修 30 學分(核心選修至少 6 學分)】。
   Before graduation, each student should complete at least 38 credits, including 8 required credits (Thesis 6 credits and Seminar 2credits) and 30 elective credits (**Core elective** at least 6 credits).
2. 核心選修課程為:「高等生產管理」、「資料探勘」、**「進化式演算法」**與「實驗設計」。
   Core elective subjects include:「Advanced Production Management」,「Data Mining」,「**Evolutionary Algorithms**」,「Design of Experiment」.
3. 註記「＊」課程為外籍生共同選修之全英文授課，不受跨系修課 1/3 門檻限制。
   Remarks"＊" Common elective curriculum is fully instructed in English for foreign students and will not be subject to the 1/3 threshold of cross-discipline courses.
4. 114 學年度入學適用。
   The regulation shall be applied starting 2025.
5. 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 applicaiton.
6. 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.