

Course Flow Chart for 2023 Fall and 2024 Spring Semester

Academic Year: 112 (Aug 2023~ Jul 2024)

Department: Department of Industrial Engineering and Management

Academic Degree: Master of Science (MS in Industrial Engineering and Management)

(112.3.15 111 學年度第二次系課程會議通過 Approved by the Second Department Curriculum Committee on Mar 2nd,2023)

學分組合:講授時數-實習時數-學分數 Credit Format: Lecture Hours - Internship Hours - Total Credits

第一學年 First academic year		第二學年 Second academic year	
Fall Semester	Spring Semester	Fall Semester	Spring Semester
專業必修(計 11 學分) Department Required Courses (11 credits)			
研究方法 Research Method 3-0-3	科技論文寫作與專題討論 Technical Writing and Research Discussion 2-0-2	碩士論文 Master Thesis 3-0-3	碩士論文 Master Thesis 3-0-3
3-0-3	2-0-2	3-0-3	3-0-3
專業選修(至少應修 27 學分) Elective Courses: (at least 27 credits)			
工業工程與管理概論 Introduction to Industrial Engineering and Management 3-0-3		工業工程與管理專題(一) Special Topics on Industrial Engineering and Management (I) 3-0-3	工業工程與管理專題(二) Special Topics on Industrial Engineering and Management (II) 3-0-3
基礎專業課程 Courses for Professional Skills			
<u>作業研究學程</u>			
線性規劃 Linear Programming 3-0-3	隨機程序 Stochastic Processes 3-0-3	動態規劃 Dynamic Programming 3-0-3	
系統模擬 System Simulation 3-0-3	決策理論 Decision Theory 3-0-3	網路流通 Distribution Network 3-0-3	整體後勤支援系統分析 System Analysis of Overall Logistics Support 3-0-3
作業研究 Operations Research 3-0-3	人工智慧 Artificial Intelligence 3-0-3		
	最佳化與啟發式演算法 Optimization and Heuristics 3-0-3		
<u>資訊科技學程</u>			
大數據分析與機器學習 Big Data Analysis and Machine Learning 3-0-3	物件導向系統分析與設計 Object Oriented Systems Analysis and Design 3-0-3	資訊系統成效評估 Performance Evaluation of Information Technology 3-0-3	產業資訊化與智能管理 E-Business and intelligent management 3-0-3
	知識管理 Knowledge Management 3-0-3		
<u>統計品管學程</u>			
高等品質管理 Advanced Quality Control 3-0-3	可靠度工程 Reliability Engineering 3-0-3	預測與迴歸模式 Prediction and Regression 3-0-3	全面品質管理 Total Quality Management 3-0-3
	多變量分析 Multivariate Data Analysis 3-0-3	品質工程 Quality Engineering 3-0-3	
	實驗設計與分析 Experimental Design & Analysis 3-0-3		
<u>人因工程學程</u>			
人因工程 Human Factor Engineering 3-0-3	人機介面 User Interface 3-0-3		
工業環境與安全 Industrial Environment and Safety 3-0-3	認知心理學 Cognitive Psychology 3-0-3		
<u>生產製造學程</u>			
電腦輔助製造系統管理及控制 Computer-Aided Management and Control of Manufacturing Systems 3-0-3	高等設施規劃 Advanced Facility Planning 3-0-3		精實生產管理 Lean Production Management 3-0-3
高等生產管理 Advanced Production Management 3-0-3	高等企業資源規劃 Advanced Enterprise Resource Planning 3-0-3		
生產排程 Production Scheduling 3-0-3			

特色領域課程 Courses for Specific Fields

物流與供應鏈領域

物流管理
Logistics management
3-0-3

全球供應鏈管理
Global Supply Chain
Management
3-0-3

全球運輸規劃
Global Transportation Planning
3-0-3

供應鏈模式分析
Supply Chain Model and Analysis
3-0-3

進階產業實務實習(一)
Advanced Industry Internship (I)
0-6-3

暑期進階產業實務實習(一)
Summer Advanced Industry
Internship(I)
0-4-2

暑期進階產業實務實習(二)
Summer Advanced Industry
Internship(II)
0-4-2

暑期進階海外產業實務實習(一)
Summer Overseas Advanced
Industry Internship(I)
0-4-2

暑期進階海外產業實務實習(二)
Summer Overseas Advanced
Industry Internship(II)
0-4-2

存貨理論
Inventory Theory
3-0-3

進階產業實務實習(二)
Advanced Industrial Internship (II)
0-6-3

健康產業管理領域

醫院管理工程
Hospital Management Engineering
3-0-3

醫務品質管理
Health Care Quality
Management
3-0-3

醫療資訊系統
Introduction of Medical System
3-0-3

電腦輔助檢測與診斷
Computer Aided Detection and
Diagnosis
3-0-3

The minimum graduation credits required for graduate students are 38 credits, including 6 credits of master's thesis.

本系碩士班最低畢業學分數為 38 學分(含論文 6 學分)
