**Academic Year:** 106 (Aug 2017~ Jul2018)

**Department:** Department of Industrial Engineering and Management

**Academic Degree:** Master of Science (MS)

**Require courses:** 106.11.22updated

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| **First Year** | **Second Year** |
| **1st semester** | **2nd semester** | **1st semester** | **2nd semester** |
| Require courses for Department (Total 11credits) |
| Research Method 3-0-3 | Technical Writing and Research Discussion 2-0-2 | Master Thesis 3-0-3 | Master Thesis 3-0-3 |
| 3-0-3 | 2-0-2 | 3-0-3 | 3-0-3 |
| **Required Courses:** 38 Credits (including Master Thesis：6 Credits) |
| **Selected Courses:** at least 27 Credits for required |

Selected courses:

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| **First Year** | **Second Year** |
| **1st semester** | **2nd semester** | **1st semester** | **2nd semester** |
| **Selected Courses:** at least 27 Credits for required |
| Introduction to Industrial Engineering and Management 3-0-3 |  | Special Topics on Industrial Engineering and Management (一)3-0-3 | Special Topics on Industrial Engineering and Management (二)3-0-3 |
| **Courses for Professional Skills** |
| Operations Research3-0-3 | Decision Theory 3-0-3 | Dynamic Programming3-0-3 | System Analysis of Overall Logistics Support3-0-3 |
| Linear Programming3-0-3 | Artificial Intelligence3-0-3 | Distribution Network 3-0-3 |  |
| Stochastic Processes3-0-3 | Discrete Optimization3-0-3 |  |  |
| Fuzzy Theory and Application3-0-3 |  |  |  |
| System Simulation3-0-3 |  |  |  |
| Stochastic models in Production systems 3-0-3 | Reliability Engineering3-0-3 | Prediction and Regression Model3-0-3 | Quality Engineering3-0-3 |
| Mathematical Statistics 3-0-3 | Multivariate Data Analysis3-0-3 |  |  |
| Advanced Quality Control3-0-3 | Experimental Design & Analysis3-0-3 |  |  |
| Human Factor Engineering3-0-3 | User Interface3-0-3 |  |  |
| Industrial Environment and Safety3-0-3 | Cognitive Psychology3-0-3 |  |  |
| Computer-Aided Management and Control of Manufacturing Systems3-0-3 | Advanced Facility Planning3-0-3 | Computer Integration Manufacturing3-0-3 |  |
| Advanced Production Management3-0-3 | Production Scheduling3-0-3 |  |  |
| Big Data Analysis and Machine Learning3-0-3 | Object Oriented Systems Analysis and Design3-0-3 |  |  |
|  | Advanced Enterprise Resource Planning3-0-3 |  |  |
| **Courses for Specific Fields** |
| Logistics management3-0-3 | Global Supply Chain Management3-0-3 | Advanced Industrial Practice Research (I)0-6-3 | Advanced Industrial Practice Research(Ⅱ)0-6-3 |
| Hospital Management Engineering 3-0-3 | Global Transportation Planning3-0-3 | Summer Advanced Industrial Internship(I) 0-4-2 |  |
|  | Knowledge Management3-0-3 | Summer Advanced Industrial Internship(Ⅱ) 0-4-2 |  |
|  | Health Care Quality Management3-0-3 | Summer Overseas Advanced Industrial Internship(I) 0-4-2 |  |
|  | Introduction of Medical System3-0-3 | Summer Overseas Advanced Industrial Internship(Ⅱ) 0-4-2 |  |
|  |  | Computer Aided Detection and Diagnosis3-0-3 |  |
| **Required Courses**：38 Credits (including Master Thesis：6 Credits) |

Department: Department of Industrial Engineering and Management (**In-Serves Graduate Program**)

Academic Degree: Master of Science (MS)

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| **First Year** |  | **Second Year** |
| **1st semester** | **2nd semester** | **Summer Remedial Course** | **1st semester** | **2nd semester** |
| **Require courses for Department :**Total 6 credits |  |  |
|  |  |  | Master Thesis3-0-3 | Master Thesis3-0-3 |
| **Require courses** :Total 15 credits |
| Statistics 3-0-3 | Research Method3-0-3 | Customer Relationship Management3-0-3 | Advanced Quality Control 3-0-3 | Decision Analysis and Management3-0-3 |
| Operations Research 3-0-3 | Advanced Production Management3-0-3 | Total Quality and Six Sigma Management3-0-3 | Industry Informatization and Intelligent Management3-0-3 | Reliability Engineering and Management3-0-3 |
| Innovation and Strategy Management3-0-3 | Application of Internet of Things and Large Data Analysis 3-0-3 | Advanced Industry Management Practice 3-0-3 | Inventory Management and Analysis3-0-3 | Enterprise Resource Planning3-0-3 |
| Project Management3-0-3 | The Application of Data Analysis 3-0-3 | Advanced Office Automation3-0-3 | Global Supply Chain Management3-0-3 |  |
| Human Resources Management 3-0-3 | Organizational Behavior and Management3-0-3 |  |  |  |
| Financial Management 3-0-3 | Process Reengineering and Simulation 3-0-3 |  |  |  |
| Lean Production Management3-0-3 | Human Factors Engineering in Industrial Application3-0-3 |  |  |  |
| **Required Courses**：36 Credits (including Master Thesis：6 Credits) |

**Academic Year:** 106 (Aug 2017~ Jul2018)

**Department:** Department of Industrial Engineering and Management

**Academic Degree:** Master of Science (MS) (MS in Logistic & Supply Chain Management)

**Require courses:** 106.11.22updated

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| --- | --- |
| **First Year** | **Second Year** |
| **1st semester** | **2nd semester** | **1st semester** | **2nd semester** |
| **Require courses for Department :**Total 11 credits |
| Research Method3-0-3 | Technical Writing and Research Discussion2-0-2 | Master Thesis3-0-3 | Master Thesis3-0-3 |
| 3-0-3 | 2-0-2 | 3-0-3 | 3-0-3 |
| **Require courses** :Total 6 credits |
| Logistics management3-0-3 |  |  |  |
| Operations Research and Network Flows3-0-3 |  |  |  |
| 6-0-6 |  |  |  |
| **Selected Courses:** at least21 Credits for required |
| **Required Courses:**38 Credits (including Master Thesis：6 Credits) |

Selected courses:

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| **Selected Courses**: at least18 Credits for required |
| **First Year** | **Second Year** |
| **2nd semester** | **1st semester** | **2nd semester** | **1st semester** |
|  |  |  |  |
|  | 全球運籌資訊系統 3-0-3 |  |  |
|  | Global Supply Chain Management3-0-3 | Supply Chain Model and Analysis 3-0-3 | Analysis of Integrated Logistics Support System3-0-3 |
|  | Global Transportation Planning3-0-3 |  |  |
|  | Production Scheduling3-0-3 |  |  |
| Fuzzy Theory and Application3-0-3 | Artificial Intelligence3-0-3 | Inventory Theory3-0-3 |  |
| Advanced Production Management3-0-3 | Discrete Optimization3-0-3 |  |  |
| Advanced Quality Control3-0-3 | Advanced Facility Planning3-0-3 |  |  |
| Big Data Analysis and Machine Learning3-0-3 | Object Oriented Systems Analysis and Design 3-0-3 |  | International Marketing3-0-3 |
| International Business Management3-0-3 | Advanced Enterprise Resource Planning3-0-3 | Business Strategy3-0-3 | E-Business3-0-3 |
| System Simulation3-0-3  |  | Advanced Industrial Practice Research (I)0-6-3 | Advanced Industrial Practice Research(Ⅱ)0-6-3 |
|  |  | Summer Advanced Industrial Internship(I) 0-4-2 |  |
|  |  | Summer Advanced Industrial Internship(Ⅱ) 0-4-2 |  |
|  |  | Summer Overseas Advanced Industrial Internship(I) 0-4-2 |  |
|  |  | Summer Overseas Advanced Industrial Internship(Ⅱ) 0-4-2 |  |

Department: Department of Industrial Engineering and Management (**In-Serves Graduate Program**)

Academic Degree: Master of Science (MS) (MS in Logistic & Supply Chain Management)

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| **First Year** |  | **Second Year** |
| **1st semester** | **2nd semester** | **Summer Remedial Course** | **1st semester** | **2nd semester** |
| **Require courses for Department :**Total 6credits |
|  |  |  | Master Thesis3-0-3 | Master Thesis3-0-3 |
| **Require courses** :Total 15 credits |  |  |
| Statistics3-0-3 | Research Method 3-0-3 |  | Global Supply Chain Management 3-0-3 |  |
| Operations Research and Network Flows3-0-3 | Global Supply Chain Management3-0-3 |  |  |  |
| **Selected Courses:** at least18 Credits for required |
| Strategic Management3-0-3 | Marketing Management3-0-3 | Customer Relationship Management3-0-3 | E-Business and Information Management3-0-3 | Enterprise Resource Planning3-0-3 |
| Project Management3-0-3 | The Application of Data Analysis3-0-3 | Advanced Industrial Internship3-0-3 | Inventory Management and Analysis3-0-3 | Decision Analysis and Management3-0-3 |
| Organizational Behavior and Management3-0-3 | Human Resources Management3-0-3 | Advanced Office Automation 3-0-3 | Advanced Quality Control3-0-3 |  |
| Financial Management3-0-3 | Process Reengineering and Simulation3-0-3 |  |  |  |
|  | Advanced Production Management3-0-3 |  |  |  |
| **Required Courses:**39 Credits (including Master Thesis：6 Credits) |