**元智大學　資訊管理學系博士班**

**必修科目表**

**Ph.D. Program of Information Management Department at Yuan Ze University**

**List of Required Courses**

**（109學年度入學新生適用）**

**(Applicable to Students Admitted in Academic Year of 2020)**

109.05.06 一○八學年度第六次教務會議通過

Passed by the 6th Academic Affairs Meeting, Academic Year 2019, on May 06, 2020

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| 學年Academic Year學期Semester科目Subject | 第一學年 1st Academic Year | 第二學年2nd Academic Year | 第三學年3rd Academic Year | 第四學年4th Academic Year |
| 上學期Fall | 下學期Spring | 上學期Fall | 下學期Spring | 上學期Fall | 下學期Spring | 上學期Fall | 下學期Spring |
| 必修科目Compulsory管理學程：必修（6）+高等資管專題研討（4）資科學程：任選一門必修（3）+高等資管專題研討（4） | 高等資管專題研討一( Seminar in Advanced Information ManagementⅠ)IM901(1) | 高等資管專題研討二(Seminar in Advanced Information ManagementⅡ)IM902(1) | 高等資管專題研討三(Seminar in Advanced Information ManagementⅢ)IM903(1) | 高等資管專題研討四(Seminar in Advanced Information ManagementⅣ)IM904(1) |  |  |  |  |
| 高等研究方法(Advanced Research Methods)IM915(3) | 資訊管理研究(Advanced Study in Information Management)IM907(3) |  |  |  |  |  |  |
| 高等計量決策方法（Advanced Quantitative Method Decision Making）IM916（3） | 演算法(Algorithms)IM911(3) |  |  |  |  |  |  |
| 離散數學(Discrete Mathematics)IM912(3) |  |  |  |  |  |  |  |
| 學期學分小計Credits each semester | 10 | 7 | 1 | 1 |  |  |  |  |
| 備註Remarks | 1.畢業最低總學分數為34學分，另加博士論文一篇。Students must take a minimum of 34 credits and complete one doctoral dissertation for graduation.2.博士生須於博一上學期開學前自行選定任一學程(資訊科技學程、管理學程)進行修課。Ph.D. students must choose any one of the programs (Information Technology and Management) before first semester starts.3.管理學程之博士生， 先修課程：企業研究方法(零學分；至碩士班修課，或以碩士班成績抵免) 必修課程：高等研究方法、資訊管理研究。Prerequisites courses of the Management Program: Business Research Methodology (0 credit; can be taken in the MA program, or can be waived using scores gained in the MA program )Compulsory courses of the Management Program: Advanced Research Methods, and Advanced Study in Information Management.4.資訊科技學程之博士生，下列三門科目中至少要選修一門課：高等計量決策方法、演算法、離散數學。Compulsory courses of the Information Technology Program: One of the following must be taken: Advanced Quantitative Methods Decision Making, Discrete Mathematics, and Algorithms.5.博士生須依本校學術研究倫理教育課程實施要點規定，於入學第一學期結束前完成學術研究倫理教育課程，最遲須於申請學位口試前補修完成，未完成本課程，不得申請學位口試。For those graduate students who shall complete Academic Research Ethics Education Course before the end of their first academic semester, they must follow the regulations of Yuan Ze University Academic Research Ethics Education Course Implementation Highlights. The latest deadline for them shall be their course completions and then their applications towards the degree’s oral exam.6.其他之詳細規定，請參照本系「博士班修業規定」之相關規定辦理。Please refer to the Doctor of Philosophy Rules for more details. |

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**元智大學　資訊管理學系博士班**

**選修科目表**

**Ph.D. Program of Information Management Department at Yuan Ze University**

**List of Elective Courses**

**（109學年度入學新生適用）**

**(Applicable to Students Admitted in Academic Year of 2020)**

109.05.06 一○八學年度第六次教務會議通過

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| 類別/組別Program | 課號Course Code | 中文課名Course Name in Chinese | 英文課名Course Name in English | 學分數 Credits |
| 大數據分析Data Analytics | IM711 | 資料儲存與擷取 | Data Storage and Retrieval | 3 |
| IM712 | 機器學習  | Machine Learning  | 3 |
| IM713 | 資料視覺化應用 | Data Visualization | 3 |
| IM717 | 社群網絡資料分析 | Social Network Data Analytics | 3 |
| IM718 | 文本與網頁分析 | Text and Web Analytics | 3 |
| IM719 | 行銷資料分析 | Marketing Data Analytics | 3 |
| IM720 | 金融資料分析 | Financial Data Analytics | 3 |
| IM727 | 資料分析工具 | Data Analytical Tool | 3 |
| IM741 | 專業研習(I) | MIS Professional Study(I) | 3 |
| IM742 | 專業研習(II) | MIS Professional Study(II) | 3 |
| IM729 | 智慧行銷 | Intelligent Marketing | 3 |
| IM736 | 社群分析 | Social Media Analytics | 3 |
| IM737 | 智慧製造 | Smart Manufacturing | 3 |
| IM714 | 大數據倫理與法律專題 | Ethical and Legal Issues in Big Data | 3 |
| IM715 | 資料科學統整專題 | Data Science Capstone Course | 3 |
| IM716 | 機器學習 II (預測模型) | Machine Learning II (Predictive Modelling) | 3 |
| IM721 | 醫療資料分析 | Medical and Healthcare Data Analytics | 3 |
| IM722 | 消費者行為資料分析 | Consumer Behavior Data Analytics | 3 |
| IM723 | 開放政府專題 | Government Open Data Issues | 3 |
| IM724 | 進階數據分析 | Advanced Data Analytics | 3 |
| 資訊管理與創新Information Management & Innovation | IM504 | 智慧型管理系統 | Intelligent Management Systems | 3 |
| IM526 | 作業流程管理專題研討 | Topics in Work Flow Management | 3 |
| IM527 | 電子商務專題研討 | Topics in Electronic Commerce | 3 |
| IM539 | 醫療資訊系統 | Health Information Systems | 3 |
| IM547 | 資訊技術管理專題 | Seminar on Information Technology and Management | 3 |
| IM553 | 商業智慧 | Business Intelligence | 3 |
| IM574 | 電子化企業專題研討 | Topics in E-Business | 3 |
| IM576 | 軟體工程 | Software Engineering | 3 |
| IM587 | 醫療資訊專題 | Special Topics on Medical Informatics | 3 |
| IM514 | 企業研究方法 | Business Research Methodology | 3 |
| IM516 | 網際網路行銷學 | Internet Marketing | 3 |
| IM533 | 人力資源管理 | Human Resource Management | 3 |
| IM564 | 電子化企業管理 | E-Business Management | 3 |
| IM566 | 知識管理 | Knowledge Management | 3 |
| IM569 | 行銷管理 | Marketing Management | 3 |
| IM572 | 專案管理 | Project Management | 3 |
| IM588 | 創業管理實務 | Entrepreneurship | 3 |
| IM613 | 專案管理專題研討 | Seminar on Project Management | 3 |
| IM507 | 決策支援系統 | Decision Support Systems | 3 |
| IM531 | 問題解決與決策 | Problem Solving and Decision Making | 3 |
| IM555 | 多變量分析 | Multivariate Analysis | 3 |
| IM557 | 組合最佳化 | Combinatorial Optimization | 3 |
| IM589 | 啓發式最佳化 | Heuristic Optimization | 3 |
| IM619 | 多準則決策與分析 | Multiple Criteria Decision Making and Analysis | 3 |
| IM622 | 決策分析 | Decision Analysis | 3 |
| IM625 | 約略集理論及資料分析 | Rough Set Theory and Data Analytic | 3 |
| IM525 | 計算與機率式學習及其應用 | Computational Learning , Probabilistic Learning and Their Applications | 3 |
| IM528 | 網路應用與管理 | Network Application and Management | 3 |
| IM530 | 類神經網路及其應用 | Artificial Neural Networks and Their Applications | 3 |
| IM532 | 知識探勘與資料剖析 | Knowledge Discovery and Data Mining  | 3 |
| IM534 | 基因演算法則 | Genetic Algorithms | 3 |
| IM535 | 計算式智慧專題 | Topics in Computational Intelligence  | 3 |
| IM536 | 高等演算法 | Advanced Computer Algorithms | 3 |
| IM542 | 模糊系統理論及應用 | Fuzzy Systems Theory and applications | 3 |
| IM552 | 資訊網路專題 | Topics in Computer Networks | 3 |
| IM556 | 模糊資料庫 | Fuzzy Database | 3 |
| IM573 | 數位影像技術 | Digital Image Processing | 3 |
| IM578 | 全球資訊網技術 | Web Technologies | 3 |
| IM585 | 資訊科技專題 | Seminar on Information Technology | 3 |
| IM586 | 模糊動態系統 | Fuzzy Dynamical Systems | 3 |
| IM614 | 資訊擷取 | Information Retrieval | 3 |
| IM616 | 生理訊號之臨床應用 | Clinical Application of Biophysioloical signals | 3 |
| IM617 | 雲端計算原理 | The Principle of Cloud Computing | 3 |
| IM620 | 資訊安全 | Information Security | 3 |
| IM811 | 社會變遷與創新 | Social Transformation and Creative Destruction | 3 |
| IM813 | 社會企業與領導 | Social Entrepreneurs and Leadership | 3 |
| IM815 | 微型金融與發展 | Microfinance and Development | 3 |
| IM818 | 全球化與產業發展 | Globalization and Industry Development | 3 |
| IM819 | 管理經濟學 | Managerial Economics | 3 |
| IM831 | 資訊倫理 | Information Ethics | 3 |
| IM835 | 數位落差專題 | Seminar in Digital Divide | 3 |
| IM836 | 資訊法律專題 | Seminar on Information Law | 3 |
| IM837 | 數位內容產業專題 | Seminar on Digital Content Industry | 3 |
| IM838 | 數位治理 | Digital Governance | 3 |
| 其他Others | IM568 | 專業研習 | MIS Professional Study | 3 |
| IM575 | 醫療經營管理講座 | Lectures on Management of Health Services Organizations | 3 |
| 備註Remarks |  |

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