

# 109 學年度第一學期資訊管理學系 博士班資格考試範圍公布

考試時間：

109 年 11 月 19 日(星期四) 08:30~12:30

考試地點：商學院 260905 研討室

**備註：請用原子筆，勿用鉛筆作答。**

-----高等研究方法 A 卷-----

考試方式： OPEN BOOK

CLOSED BOOK

考試範圍：

1. Pamela S. Schindler (2019) Business Research Methods, 13th Edition., McGraw-Hill.
2. Chava Frankfort-Nachmias, David Nachmias & Jack DeWaard (2014) Research Methods in the Social Sciences, 8th ed. Worth.
3. Robert K. Yin (2014) Case Study Research Design and Methods, 5th Edition., Sage.
4. Corbin, J. and Strauss, A. (2014) Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory. SAGE.
5. Eisenhardt, K. M. (1989) Building Theories form Case Study Research, Academy of Management Review, 14, 532-550.
6. Morgan, G. and Smircich, L. (1980) The Case for Qualitative Research, Academy of Management Review, 5(4), 491-500.

The objectives of this subject are to examine the student's abilities of justifying the research gap/research questions, selecting the appropriate methodology, and construct detailed plans to answer the research questions.

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-----高等研究方法 B 卷-----

考試方式： OPEN BOOK and OPEN INTERNET     CLOSED BOOK

考試範圍：

1. Theory Building
2. MIS theory and research process
3. Research design
4. data collection and analysis

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-----高等數量方法 A 卷-----

考試方式： OPEN BOOK       CLOSED BOOK

考試範圍：

Patrick Siarry, Editor, *Metaheuristics*, Springer, 2016 (只包括 Chapter 1 – Chapter 6)

Gareth James et al. *An Introduction to Statistical Learning - with Applications in R*, Springer, 2013 (不包括 Chapter 7)

Chen, C-L and Chen C-L, 2009, “Hybrid Metaheuristics for Unrelated Parallel-Machine Scheduling with Sequence-Dependent Setup Times” *International Journal of Advanced Manufacturing Technology*, Vol. 43, pp. 161-169.

Chen, C-L, Kaber, D.B., and Dempsey, P.G., 2004, “Using Feed-forward Neural Networks and Forward Selection of Input Variables for an Ergonomics Data Classification Problem,” *Human Factors & Ergonomics in Manufacturing*, Vol. 14(1), pp.31-49.

Chen, C-L, Kaber, D.B., and Dempsey, P.G., 2000, “A new approach to applying feedforward neural networks to the prediction of musculoskeletal disorder risk,” *Applied Ergonomics*, Vol. 31, pp. 269-282.

Chen, C-L, Neppalli, V.R., and Aljaber, N., 1996, “Genetic Algorithms Applied to the Continuous Flow Shop Problem,” *Computers and Industrial Engineering*, Vol. 30, No. 4, pp. 919-929.

Hart, S.M. and Chen, C-L, 1994, "Simulated Annealing and the Mapping Problem: A Computational Study," *Computers & Operations Research*, Vol. 21, No. 4, pp. 455-461.

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-----高等數量方法 B 卷-----

考試方式： OPEN BOOK                       CLOSED BOOK

考試範圍：

考試範圍包括管理科學與決策科學相關數量模式方法之建構與決策應用，如數學規劃法、隨機過程、模擬、啟發式演算法等。

數學規劃法(Mathematical Programming)包括：

線性規劃、整數規劃及目標規劃(Linear Programming, Integer Programming, and Goal Programming) ，網路規劃及運輸問題(Network Flow Programming and Transportation Problem) ，非線性規劃及動態規劃(Non-linear Programming and Dynamic Programming) 等。

隨機模型(Stochastic models)/非確定性模型方法(Non-Deterministic Models)包括：等候模型(Queuing Models)、模擬模型(Simulation Models)、馬科夫分析(Markov Analysis)及賽局論(Game Theory)等。

萬用啟發式演算法(Metaheuristics)包括：

禁忌搜尋法(Tabu Search)、模擬退火法(Simulated Annealing)、基因演算法(Genetic Algorithm)、蟻群優化演算法(Ant Colony Optimization)、粒子群優化演算法(Particle Swarm Optimization)、類神經網路(Artificial Neural Networks)演算法等。

參考書目

Render, Stair, Jr., Hanna, and Hale, Quantitative Analysis for Management, 12th ed., Pearson, 2015.

Hillier and Lieberman, Introduction to Operations Research, 10th ed., McGraw-Hill, 2015.

Taylor, Introduction to Management Science, 12th ed., Pearson, 2016.

Patrick Siarry (Editor), Metaheuristics, Springer, 2016.

Christian Blum and Gunther R. Raidl, Hybrid Metaheuristics: Powerful Tools for Optimization, Springer, 2016

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-----資訊管理研究 A 卷-----

考試方式：■ OPEN BOOK ■ CLOSED BOOK  
(第一小時 Close book, 第二小時 Open book)

考試範圍：

1. 林東清，資訊管理(7 版)：e 化企業的核心競爭能力，元照出版，2018；
2. MIS Quarterly, March 2019- September 2020 發表的論文；
3. 梁定澎編著，資訊管理理論，前程出版社，2012。

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-----資訊管理研究 B 卷-----

考試方式：  OPEN BOOK and OPEN INTERNET     CLOSED BOOK

考試範圍：

The exam covers Important IS theories including the following three areas:

- I. IS life cycle: including DeLone and McLean's Success Model, Technology Acceptance Model, UTAUT (Unified Theory of Acceptance and Use of Technology) model, and Task-Technology Fit Theory
- II. Strategic and economic theories: including Resource-Based View, Business Value of IT, and transaction cost theory
- III. Socio-psychological theories: including Elaborative-likelihood Model, Organizational Information Processing Theory, Organizational Learning, Absorptive Capacity and the Power of Knowledge