Hong Kong Baptist University
Faculty of Science
Department of Mathematics

Title (Units): ORBS7090 Managing Organisational Performance (3,3,0)

Course Aims: The course will cover performance management, soft systems methodologies, and data envelope analysis (DEA) models in order to match the active labour market policies.

Prerequisite: No

Prepared by: Yau Chin Ko

Remark: This course is delivered by staff of HKBU or University of Kent.

Course Intended Learning Outcomes (CILOs):

Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
1	Explain the originality in the application of quantitative and qualitative approaches to the evaluation of the performance of organizations.
2	Critically and creatively apply soft systems methodology to performance management and other complex problems.
3	Explain how the above techniques are used to create and interpret knowledge in the performance evaluation.
4	Communicate their findings and recommendations in an effective manner to managers.

Teaching & Learning Activities (TLAs):

CILO	TLAs will include the following:
1,2,3	New concepts will be introduced in lectures, together with instructions and any requisite theory. Where possible, theory will be demonstrated using practical examples.
1,2,3,4	Seminars will enable students to apply theories taught during the course to real examples. Students will be expected to actively contribute to seminars.

Assessment:

No.	Assessment Methods	Weighting	CILO Addressed	Remarks
1	Assignment	40%	all	Assignments are designed to measure students' understanding of the theory, techniques, and applications of operation management. Tests may be conducted to monitor the students' understanding of the theory, techniques and skills taught in the class. This may involve, but not limited to, in-class discussions of rigorous technical problems and their solutions.
2	Examination	60%	all	Final Examination is designed to see how far students have achieved their intended learning outcomes especially in the knowledge domain. Students should have a thorough understanding of the knowledge and apply them correctly in different context to do well in the exam.

Course Intended Learning Outcomes and Weighting:

Content	CILO No.	Teaching (in hours)
1. Introduction to performance management	1,2,3	6
2. Performance management for public sector organisations	1,2,3	8
3. Classical DEA Models	1,2,3	8
4. Extensions of Classical Models	1,2,3	4

Textbook:

1. Checkland, P. and Poulter, J. (2006) *Learning for Action.* Chichester: Wiley.
2. Cooper, W.W., Seiford, L.M and Tone, K. (2007) *Data Envelopment Analysis: A Comprehensive Text with Models, Applications, References and DEA-Solver Software (2nd Edition).* Springer.
3. Kaplan, R.S. and Norton, D.P. (2004) *Strategy Maps: Converting Intangible Assets into Tangible Outcomes.* Harvard Business Press.
4. Wade, D. and Recardo, R. (2001) *Corporate Performance Management.* Butterworth.
5. Zhu, J. (2009) *Quantitative Models for Performance Evaluation and Benchmarking: Data Envelopment Analysis with Spreadsheets and DEA Excel Solver (2nd Edition).* Springer.

Journal articles:

1. W. B. Liu, John Sharp, Z. M. Wu. (2006). *Preference, production and performance in data envelopment analysis.* Annals of Operations Research 145: 105-127.
2. W. B. Liu, D. Q. Zhang, W. Meng, X. X. Li, F. Xu. (2011). *A study of DEA models without explicit inputs.* Omega 39: 472-480.
3. Liu, W., et al. (2012) *Developing a performance management system using soft systems methodology: A Chinese case study.* European Journal of Operational Research 223(2): 529-540.

Course Content in Outline:

Topics	Hours

1. Introduction to performance management — 6
   - Basic functions of performance management
   - Performance measurements and indicators
   - Approaches in performance evaluation
   - Main issues and difficulties
2. Performance management for public sector organisations — 8
   - Soft Systems Methodology (SSM)
   - Evaluation framework for public sector organisations
   - 3E indicator system
   - Ratio analysis - different approaches to deciding weights
   - AHP methods
3. Classical DEA Models — 8
   - Statistics methods - regressions
   - CCR models and BCC models
   - Additive models
   - Index models
4. Extensions of Classical Models — 4
   - Russell measurement and Russell DEA models
   - Benchmarking in Private and Public Sectors

(Approved by the Science Faculty Board Meeting by circulation in August 2024)
(Approved by the Department Management Committee on 7 August 2024)

(Approved by the Science Faculty Board Meeting 31 October 2023)
(Approved by the Department Management Committee on 5 September 2023)