City University of Hong Kong

Information on a Course
offered by Department of Management Sciences
with effect from Semester A in 2009 / 2010

Part I

Course Title: Management Science

Course Code: MS5220

Course Duration: One Semester

No. of Credit Units: 3

Level: P5

Medium of Instruction: English

Prerequisites: Nil

Precursors: Nil

Equivalent Courses: Nil

Exclusive Courses: Nil

Part II

1.   **Course Aims**
     To teach the basic principles of several standard techniques in Management
     Science/Operations Research (MS/OR).

2. **Course Intended Learning Outcomes (CILOs)**
   Upon successful completion of this course, students should be able to:

   Appreciate and be knowledgeable of the typical first-year Master's level material considered in the business school management science topics selected to be covered in the course.

3. **Teaching and Learning Activities (TLAs)**
   (Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

   - Lecture and Class Discussions
     Concepts and general knowledge of the subject material are explained and discussed.

   - Exercises
     Problems sets are assigned for students to consolidate their understanding of the concepts and methods.

   Constructive Alignment of ILOs and Teaching and Learning Activities

ILO	Teaching and Learning Activity	
	Lecture and Class Discussion	Exercises
I	Yes	Yes

4. **Assessment Tasks/Activities**
   (Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

Written examination (3 hours)	70%
Exercises	30%
Total	100%

   Constructive Alignment of ILOs and Assessment Methods

ILO	Exercises	Written Examination
I	3	3
Total	30%	70%

   Remarks: 1: minor focus on the ILO; 2: significant focus on the ILO; 3: major focus on the ILO

5. Grading of Student Achievement:

Case Report

Letter Grade	Grade Point	Grade Definitions	
A+ A A-	4.3 4.0 3.7	Excellent:	Strong evidence of original thinking; good organization, capacity to analyse and synthesize; strong evidence of extensive knowledge base.
B+ B B-	3.3 3.0 2.7	Good:	Evidence of understanding of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of use of literature.
C+ C C-	2.3 2.0 1.7	Adequate:	Some evidence of understanding of subject, little evidence of critical capacity and analytic ability; reasonable understanding of issues.
D	1.0	Marginal:	Sufficient understanding of the subject matter to enable the student to progress without repeating the case report.
F	0.0	Failure:	Little evidence of understanding of the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.

Group Presentation

Letter Grade	Grade Point	Grade Definitions	
A+ A A-	4.3 4.0 3.7	Excellent:	Clearly and correctly state most of the critical points and important contributions of the case. Discuss issues critically. Good presentation skills. Evidence of relevant use of literature.
B+ B B-	3.3 3.0 2.7	Good:	Clearly and correctly state many of the critical points and important contributions of the case. Discuss issues critically. Good presentation skills.
C+ C C-	2.3 2.0 1.7	Adequate:	Clearly and correctly state a good number of critical points and contributions of the case.
D	1.0	Marginal:	State a small number of critical points and contributions of the case.
F	0.0	Failure:	Little evidence of understanding of the subject matter; weakness in critical and analytic skills.

Exercises

Letter Grade	Grade Point	Grade Definitions	
A+ A A-	4.3 4.0 3.7	Excellent:	Provide fully or very-close-to-fully correct answers to the problems/questions.
B+ B B-	3.3 3.0 2.7	Good:	Provide good and close-to-fully correct answers to the problems/questions.
C+ C C-	2.3 2.0 1.7	Adequate:	Provide an adequate number of correct answers to the problems/questions.
D	1.0	Marginal:	Provide a small number of correct answers to the problems/questions.
F	0.0	Failure:	Little or no evidence of ability to provide correct answers to the problems/questions

Written Examinations

Letter Grade	Grade Point	Grade Definitions	
A+ A A-	4.3 4.0 3.7	Excellent:	Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.
B+ B B-	3.3 3.0 2.7	Good:	Evidence of understanding of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues.
C+ C C-	2.3 2.0 1.7	Adequate:	Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.
D	1.0	Marginal:	Sufficient understanding of the subject matter to enable the student to progress without repeating the course.
F	0.0	Failure:	Little evidence of understanding of the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.

Part III

Keyword Syllabus:
A selection of several of the following topics, with greater emphasis on the deterministic (i.e, non-stochastic) aspects of management science:
• Linear Programming
• Integer Programming
• Multi-criteria Decision Making
• Nonlinear Programming
• Decision Analysis
• Game Theory
• Markov Analysis
• Other Relevant Management Science Topics

Recommended Readings:
Current or suitable editions of a standard Management Science textbook, such as:
Taylor BW, Introduction to Management Science, Prentice Hall.

Other relevant supplementary material, cases and references to be assigned by the course instructor.