

**THE UNIVERSITY OF HONG KONG
FACULTY OF BUSINESS AND ECONOMICS**

**School of Business
BUSI0036A-C – Quantitative Analysis for Business Decisions I
2010-2011 Second Semester**

I. Information on Instructor and Tutor

Instructor: Dr. Mei Lin
Email: linm@hku.hk
Office: Meng Wah Complex Rm 729E
Phone: 2219 4220
Consultation times: by appointment

Tutor: Christina Ho
Email: ccho@business.hku.hk
Consultation times: TBA (check WebCT course page)

Course Page: WebCT

Pre-requisites: Please refer to the [Description for Undergraduate Courses](#)

Textbook: Render, B., R.M. Stair and M.E. Hanna, *Quantitative Analysis for Management* (10th Edition, Prentice Hall) with *POM-QM for Windows Version 3* and *Excel QM* software package

II. Course Description and Objectives

■ Course Description:

Business decision making involves considerable complexity and uncertainty. This course introduces the basic concepts in quantitative business analysis to help you gain a clear understanding of the key elements in the decision making process. We discuss methods that are used extensively in business organizations. These methods provide you with the tools and the skills to approach, analyze, and solve problems of varying scales. Furthermore, this course aims at improving a decision-maker's overall problem solving ability by stressing approaches to 1) understand and question assumptions, 2) consider a richer set of solution alternatives, and 3) consider diverse measures of performance. The teaching methods will include lectures, skill-building exercises, qualitative class discussions, and a project with the support of several software packages in *Microsoft Excel*.

■ Course Objectives:

By introducing rigorous quantitative methods and theories, this course demonstrates ways to apply structured thinking on loosely defined business problems in reality. Upon successfully completing this course, you should be able to

1. employ basic statistical methods to decision making,
2. understand how to apply basic models and theories in business,
3. solve management problems effectively, and
4. use software tools to model decision problems.

III. Learning Outcomes

In this class, you will develop and sharpen your skills to

1. clearly identify an otherwise unstructured business problem and its components,
2. employ effective techniques for addressing the major challenges presented,
3. provide a solution to the decision process,
4. interpret and support your solution with qualitative explanations.

IV. Alignment of Program and Course Outcomes

Program Learning Outcome	Course Learning Outcome
1. Innovative thinking	Define and analyze unstructured problems
2. Fundamental theories of business and economics	Apply techniques/model for decision making
3. Effective decision making and problem solving	Use IT tools for problem solving
4. Effective communication skills	Evaluate and interpret solutions

V. Teaching and Learning Activities

Lecture: Approximately 60% of the class time will be used for lecturing. I will present the fundamental concepts and the related business examples. However, I intend the lectures to be highly interactive to motivate active learning and continuous participation. You will learn the class topics by following the presentation as well as interjecting with your questions and response/comments to the questions I pose. A portion of class time will involve demos of Excel exercise. You will build your Excel skills by following my demos.

Skill-Building Exercise: To reinforce the class topics, I will provide in-class problems during the lecture. This is a chance to check your knowledge and practice approaching decision problems. Instead of providing the instructor's solution, students may be asked to demonstrate their work and explain their approach clearly to the class. The idea of these exercises is to allow you to immediately apply the models and theories presented in lectures to relevant business problems; and the interactive classroom environment invigorates the learning process. *Students who are absent may lose in-class participation points if their names are called to demonstrate their solutions; students who are able to present their solutions correctly and clearly may receive extra in-class participation points. It is students' own responsibility to record their names after class for participation credits.*

Homework and Tutorial Sessions: Homework will be assigned each week. Although the grading of homework assignments is effort-based, you should devote considerable time to solve these problems. Practicing the problem-solving skills is essential for truly acquiring them. And the tutorial sessions are valuable complements to the homework assignments, as you will learn through trial and error by actively participating in the homework discussion carried out by Ms. Christina Ho. Problems outside of homework assignments will also be used in the tutorial sessions. *Tutorial participation points will be assigned based on students' performance at these sessions.*

Project: One project will be assigned to be due at the end of the semester. You will complete them in self-selected groups of five people. Please form your project groups as soon as possible. If you have problems finding a group, please see me. Your case report should include a one-page executive summary, a description of analysis section (maximum four pages), and an appendix. The executive summary should motivate the problem and include a clear statement of your findings using *non-technical language*. It should entice the reviewer (the TA or me) to want to read the analysis section. Be as clear and concise in the analysis section as possible. Relegate any detailed supporting material (e.g., figures, tables, and equations) to an appendix and reference it appropriately. Each case project integrates all learning outcomes. You can consider them checkpoints throughout the course for evaluating your progress in attaining the course objectives.

VI. Assessment

Learning outcome	Teaching and learning activity	Assessment
1. Define and analyze unstructured problems	Skill-building exercises, projects	Exams, projects
2. Apply techniques/model for decision making	Homework and tutorial sessions, projects	Homework, exams, projects
3. Use IT tools for problem solving	Skill-building exercises, projects	Homework, projects
4. Evaluate and interpret solutions	Homework and tutorial sessions, projects	Exams, projects

VII. Standards for Assessment

Exams* (mid-term 25% and final exam 35%)	60%
Homework	20%
In-Class and Tutorial Participation	5%
Project	15%
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Note: * Make-up exams will NOT be given

Midterm: To be announced

VIII. Academic Conduct

An orderly learning environment is extremely important for this course. Disruptive behaviors are inconsiderate to other students as well as to the instructor, and are absolutely unacceptable. Talking during lectures, arriving to class late, and any other disruptions of mobile devices are not allowed; students who are responsible for any of these actions will be subject to academic penalty and will be asked to leave the classroom.

Any dishonesty—such as cheating, false representation, plagiarism, etc.—that comes to my attention will result in an F in the course.

Academic dishonesty includes cheating, plagiarism, unauthorized collaboration, falsifying academic records, and any act designed to avoid participating honestly in the learning process. Scholastic dishonesty also includes, but is not limited to, providing false or misleading information to receive a postponement or an extension on an exam or other assignment. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Disciplinary Committee Regulations (<http://www.hku.hk/pubunit/cal99/104f.htm>). By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that policy statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

Tentative Course Schedule

Due dates and exam dates subject to change

Monday	Week	Topic
10/01	1	Introduction to Quantitative Analysis (Ch. 1); Basic Probability & Statistics (Ch. 2)
17/01	2	Basic Probability & Statistics (Ch. 2)
24/01	3	Regression Models (Ch. 4)
31/01	4	(2 Days) Forecasting (Ch. 5)
		<i>Feb. 2-8 Break - Lunar New Year</i>
07/02	5	(3 Days) Forecasting (Ch. 5)
14/02	6	Decision Theory (Ch. 3)
21/02	7	Inventory Control Models (Ch. 6)
28/02	8	<i>Reading/Field Trip Week</i>
		Midterm Tentative
07/03	9	Queuing Theory (Ch. 14)
14/03	10	Simulation (Ch. 15)
21/03	11	Linear Programming (Ch. 7-8)
28/03	12	Linear Programming (Ch. 7-8)
04/04	13	Project Management (Ch. 13)
11/04	14	Network Models (Ch. 12)
		Project due on Friday, April 15
18/04	15	Network Models (Ch. 12) and review