

# ISOM 3710 Management Science, Fall 2016

## Instructor

Prof. Shaohui ZHENG, imzheng@ust.hk, LSK Room 4014, Tel 2358-7751

<http://ihome.ust.hk/~imzheng>

## Tutors

Mr. Haoyu Liu, Email: hliuaw@connect.ust.hk

Ms. Xinli Xie, Email: xxiead@connect.ust.hk

An educated person is one who can explain complex ideas accurately and who can think critically. **This course will emphasize on critical thinking, not memorization: the quizzes and the final examination are open book and open notes.** However, to be successful, you should (1) ask questions when you don't understand the material, (2) treat the in-class exercises seriously, and (3) work on the homework assignment.

## General Course Outline

Introduction to scientific approaches for decision making and technical methods for managerial problem solving; Spreadsheet modeling in Excel used throughout. The central modeling framework is constrained optimization with applications to various business functions; Emphasis on model building, solution interpretation and managerial insights; Extensive hands-on exercises.

## Course Materials

(1) Textbook: *Practical Management Science*, 5<sup>th</sup> edition, by Winston and Albright, Cengage, 2016.

(Earlier versions: “*Management Science Modeling*”, “*Essentials of Practical Management Science*”.)

(2) Slides, Excel files and other course material downloadable from <http://canvas.ust.hk> using your ITSC account name/password.

## Contents to be covered

- Ch 2: Introduction to spreadsheet modeling
- Ch 3: Introduction to optimization modeling
- Ch 4: Linear Programming models
- Ch 5: Network models
- Ch 6: Optimization models with integer variables
- Ch 7: Nonlinear optimization models

## Office Hours

- Professor: 15:00-16:00 on Thursday, or by appointment, or whenever you catch me alone in my office.
- Tutors: 13:30-15:30 on Wednesday, LSK Room 4084.

## Grading

- Quiz 1 (29 September, in-class): 20%;
- Quiz 2 (27 October, in-class): 20%;
- Final examination: 55%;
- Class Attendance: 5%;
- ***Bonus point for class participation/discussion: up to 5%.***

## Important Policies

1. **There is no makeup quiz:** if you miss a quiz for any reason, its weight (20%) will be automatically shifted to the final examination.
2. Class attendance will be taken for 5 times during the semester, and you will get full mark of this part if you don't miss more than twice.
3. You are strongly encouraged to re-do all in-class exercises/examples by yourself after the class, as soon as possible, and discuss with the professor or the tutors for any problem you have.
4. You are supposed to do all the homework. (Note: you don't need to submit them, but some of the homework problems will be tested in the quizzes and final examination.) Solutions will be posted in the course website. Some difficult problems will also be discussed in the tutorial session.
5. **Please turn off your mobile phone during any lecture.**
6. To reduce interruption to the class, except approved beforehand, **students are not supposed to enter classroom if they are late for more than 15 minutes, and are not supposed to leave before the end of a lecture.**
7. Without approved beforehand, students should attend their own sections of lecture / tutorial.