ISOM2500 Business Statistics (L2)
Spring Semester 2021/22

Course Outline

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Teaching Assistant	Ms. Stacy DS Deng
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Class Schedule and Location

Room 2465, 1030-1150 (every Monday & Wednesday), 7th February – 11th May 2022

Course Description and Objectives

The objective of this course is to equip students with basic concepts and methods in statistical thinking and reasoning so that they can handle uncertainty intelligently in business environment effectively. These basis concepts and methods include **descriptive statistics**, **probability**, **statistical inference**, and **linear regression**.

Intended Learning Outcomes

Upon completion of the course, you should be able to
- Understand basic concepts and methods in statistical thinking and reasoning;
- Know how to interpret results of statistical analysis;
- Know how to apply both descriptive and basic inferential methods in statistics to solve a real problem in business environment.

Teaching Method

The method is lecturing aided by directed discussion. The context of the relevant concepts and methods will be presented first followed by the discussion of pre-designed questions and examples to explore the concepts and methods in depth.

Course Materials

Recommended Textbook: *Statistics for Business Decision Making and Analysis* (2nd ed), Robert Stine, Dean Foster, Pearson (2014)
Class PowerPoints, and other information posted on the course website on Canvas
Required software: Minitab, MS Excel

Assessment

Your grade is based on the following components:
1. Class participation 5%
2. Assignments 15% [three sets, @5%]
3. Two quizzes 40% [@20%]
4. Final Examination 40%

Details of quizzes:
1. Time: **14th March & 11th April 2022, 6:30-7:30pm, LTA**
2. Scope: materials delivered after the previous quiz
3. Closed book with a 2-sided A4-size help sheet
4. 20 multiple choice questions each

Details of examination:
1. Time: **TBA**
2. Scope: materials delivered after the previous quiz
3. Closed book with a 2-sided A4-size help sheet
4. 40 multiple choice questions

Academic Integrity

Without academic integrity, there is no serious learning. Thus, you are expected to hold the highest standard of academic integrity in the course. No cheating, or plagiarism will be tolerated. Anyone caught cheating, or plagiarism will fail the course. Please adhere to the HKUST Academic Honor Code at all time (see http://ugadmin.ust.hk/integrity/student-1.html).

Course Schedule

Module/Activity	Date
Module 1. Data and Variation	Feb 7, 9
Module 2. Association and Dependence	Feb 14
Module 3. Probability	Feb 16, 21
Module 4. Probability Models	Feb 23, 28
Module 5. Covariance and Portfolio	Mar 2
Review of Modules 1-5	Mar 7
Quiz 1 on Modules 1-5	Mar 14, evening
Module 6. Sampling and Sampling Distribution	Mar 9, 16
Module 7. Standard Error and Confidence Interval	Mar 21, 23
Module 8. Hypothesis Testing	Mar 28, 30
Review of Modules 6-8	Apr 4
Quiz 2 on Modules 6-8	Apr 11, evening
Module 9. Fitting Equation to Data	Apr 6, 20, 25
Module 10. Simple Linear Regression	Apr 27; May 4, 11