ISOM2500 – L4&L5 Business Statistics
Course Outline

LECTURE
Instructor: Dr. Baoqian PAN, Kris
Room: 5041 (LSK Business building); Email: ismtpbq@ust.hk
Office Hours: Tue & Wed 5:50pm-6:50pm; or send an email to make an appointment.

Instructional Assistant: Miss. Carey MA
Room: 4065(LSK); Email: imcma@ust.hk
Office Hours (LSK4065): Fri 5:50pm-6:50pm; or send an email to make an appointment.
Lab section: Tutorial sections will be arranged to help learn Minitab software, Excel add in and practice the exercise. Please pay attention to the Canvas email.

Class meets: Lab:
L04: 4:30pm – 5:50pm Wed, Fri Room: LSK-G005
(教室: 2407) Time Period: Feb 6 – May 8
L05: 4:30pm – 5:50pm Tue, Thu 10:30-12:00 (Mon)
(教室: 2306)

REFERENCE BOOK

SYLLABUS
This syllabus is subject to change in the event of extenuating circumstances.

Topic 1 Data description
- Recognizing the type of data
- Using graphs to see the characteristics of data
- Summarizing messy data into neat numbers

Topic 2 Probability
- Probability
- Random variable, distribution
- Discrete random variables: binomial distribution
- Continuous random variables: normal distribution, t distribution

Topic 3 Estimation
- Point estimate
- Sampling distribution
- Confidence intervals
Topic 4 Hypothesis testing
- One sample, statistically significant? Using t test
- Errors of statistical testing: Type I and Type II error
- Two independent samples significantly different? Using t test
- Examining relationships for nominal and ordinal data – Chi-square test

Topic 5 Simple Linear regression
- Basic concept
- Checking model assumption
- Testing beta
- Prediction and Estimation

COURSE WEBSITE
http://canvas.ust.hk

OBJECTIVES AND INTENDED LEARNING OUTCOMES
The objective of the course is to introduce the basic and fundamental knowledge of statistics, probability, statistical inference and linear regression. This semester, ISOM 2500 undergoes tremendous change to promote students' interest in statistics. We emphasize on
1. Hands-on experiences on data collecting and analysis through in-class games.
2. Closer connection to real life and business practice through regular class and online class.
3. Concepts and interpretation over computation practice through different formats of evaluation.

EVALUATION
Your grade in the course is based on:
• Quizzes 40%. •Final 40% •Homework 10% •Performance through the Curriculum 10%.

A. Quizzes 40% (70 minutes each). There will be 2 quizzes: each 20%.
   Note: You can miss one quiz at most with medical certificate on the day which you missed exam on. No make-up quiz will be provided.
   Seventy-five percent of the weight of missed quiz will be counted into the final, meaning if you miss quiz 1 or 2 for proper reason, then your final score = (quiz 1 or quiz 2) * 20% + 55%* final + 10% *Homework + performance.

B. Final Exam 40% (120 minutes, covers hypothesis testing and linear regression).
   If the final exam is missed, you won’t pass the course. No make-up final exam will be provided.
C. Homework assignment 10%. There will be 4 Group HW.

   Note: 1) There should be 4 persons in each group. Please sign the name on cover page of a hard copy of assignment; otherwise, you will have no record for HWs. The excuses, i.e. “forget to sign”, “Other members submit the HW without notice” etc. are not accepted.

   2) Free riding is not allowed. If you don’t join the discussion of HWs, other members of group have the right to submit HW without your permission. In addition, if you have little contribution in the discussion (e.g. Show up without preparation), your group-mates can send an email to notice me.

D. Performance through the Curriculum 10%. Your active participation is crucial for this class. You will be assessed by your contribution to in-class discussions. Based on your participation quality, you will receive either one card or two cards on each question. Please report to the instructor for recording at the end of each class.

   How to get full mark of performance?
   10% = Participate 2 games (4%) + get 1 or more cards in 6 out of 22 lectures (6%).
   Or 10% = get 1 or more cards in 10 out of 22 lectures

GRIEVANCE PROCEDURE
If you disagree with grades that have been assigned to your work, you have the possibility to meet instructors within one week after the grades have been published on the course website. Be specific about what it is that you don't agree with.

ACADEMIC INTEGRITY
Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of other groups, or tampering with the academic work of other groups. All exam answers must be your own, and you must not provide any assistance to other students during exams. Current university policy on academic dishonesty is “if a student is discovered cheating however minor the offence, the course grade will appear on the students' record with an X, to show that the grade resulted from cheating.” This X grades stays on the record until graduation. If the student cheats again and “earns” another X grade, the student will be dismissed from the university.