香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

ISOM 2500: Business Statistics

Course Information

Instructor: Lilun DU, Assistant Professor of ISOM, Room 4068, Phone: 2358-7730 (O); Email: dulilun@ust.hk; Office hour: 03:30pm-04:30pm, Tue.

TA: Anson Tong, Room 4049c, Phone: 3469-2634 (O); Email: imchtong@ust.hk; Office hour: 11:00am-12:00pm, Mon.

Objective and intended learning outcomes:

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**.

The course adopts the following approaches to meet the objectives:

- Emphasize concepts understanding and results interpretation through different methods of evaluation.
- Closer connection to real life and business practice through new content of lectures.
- Hand-on experiences on data collection and analysis through in-class experiments.

Class Meets:

- Lecture-2: 03:00pm-04:20pm, Wed/Fri.
- Lecture-3: 04:30pm-05:50pm, Tue/Thur.
- Tutorial section on quiz and Final exam (by Instructor and TA)
    - 07:00pm-09:00pm, Oct. 8th.
    - 07:00pm-09:00pm, Nov. 5th.
    - To be determined.
- Tutorial section on Excel (by TA)
    - 06:00pm-07:00pm, Sep. 23.
    - To be determined.

Course Materials:

- Recommended Textbook: “Statistics for business, decision making and analysis, 2nd edition", by Stine and Foster.
- Lecture notes, HW assignment, and practice questions will be posted on the course website (https://canvas.ust.hk/).
- Required software: Excel.

Evaluation:

1. Midterm 40%: there will be two quizzes testing Part I (20%) and Part II (20%) respectively. All questions in exams are multiple-choice ones.

    - Exam I: Oct 9th, 07:00pm-08:00pm.
    - Exam II: Nov 6th, 07:00pm-08:00pm.
    - Exam III: To be determined.

2. Final Exam 40%: covers Part III, which will also be multiple-choice format.
3. Assignments 18%: three sets of homework assignments.
4. Participation 2%: Classroom participation is crucial to a lively and effective learning environment. Your participation will be assessed according to contributions to in-class discussion and learning. It will be used as a tiebreaker when assigning grades.

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. You are encouraged to study and do homework in groups. However, no cheating, plagiarism will be tolerated. Anyone caught cheating, plagiarism will fail the course. Please make sure adhere to the HKUST Academic Honor Code at all time (see http://www.ust.hk/vpaao/integrity/).

Part	Sessions	Date[1]	Topics	
I	1	Sep. 8	Introduction	Lect. 1a
	2	Sep. 10	Descriptive Statistics I	Lect. 1b
	3	Sep. 15	Descriptive Statistics II	Lect. 1c
	4	Sep. 17	Probability	Lect. 2a
	5	Sep. 22	Conditional Probability	Lect. 2b
	6	Sep. 24	Discrete random variable	Lect. 3a
	7	Sep. 29	Covariance and portfolio	Lect. 3b
	8	Oct. 6	Game I + Review	
	9	Oct. 8	[no class]	
II	10	Oct. 13	Continuous random variable	Lect. 4a
	11	Oct. 15	Continuous random variable	Lect. 4a
	12	Oct. 20	Sampling distribution	Lect. 4b
	13	Oct. 22	Sampling distribution	Lect. 4b
	14	Oct. 27	Confidence interval	Lect. 4c
	15	Oct. 29	Confidence interval	Lect. 4c
	16	Nov. 3	Game II + Review	
	17	Nov. 5	[no class]	
III	18	Nov. 10	Hypothesis testing I	Lect. 5a
	19	Nov. 12	Hypothesis testing II	Lect. 5b
	20	Nov. 17	Hypothesis testing II	Lect. 5b
	21	Nov, 19	Simple Linear Regression	Lect. 6a
	22	Nov. 24	Curved patterns and transformation	Lect. 6b
	23	Nov. 26	Regression estimation and prediction	Lect. 6c
	24	Dec. 1	Regression diagnosis	Lect. 6d
	25	Dec. 3	Review	

[1] The date for Section L2 is on Wed/Fri