

GE2262 Business Statistics

Lecturer

Dr. Iris Yeung
Office: LAU-7239
Tel: 34428566
Email: msiris@cityu.edu.hk

Tutor

Miss Cao Chengyi
Office: LAU-7231
Tel: 34429634
Email: chengycao4@cityu.edu.hk

Aims

With today's widespread use of statistics in the media, academic and business firms, this course aims to provide students with a good understanding of basic statistical concepts so as to facilitate their decision making. The course content is based on real-world examples and cases to encourage students to develop their attitude and ability to discover and innovate.

Intended Learning Outcomes

Upon successful completion of this course, you will be able to

- Explain concepts in numerical descriptive measures, sampling distributions, confidence interval estimation, hypothesis testing, and simple linear regression model.
- Select appropriate statistical methods to analyze real-life business data, interpret the results and give recommendations for business decisions.
- Apply standard statistical software, such as Microsoft Excel, to analyze data arising from real-life business problems.
- Provide recommendations / innovations based on statistical data.

Assessment

Assignments: 25%

There are TWO individual "homework assignments". Each assignment contributes 12.5% to the total mark. The deadline for submitting the assignment to CANVAS is **Saturday, 5pm in Week 7 and 11** respectively. Please note that

- There is an automatic **deduction of 10%** for late assignments.
- Late assignments can be submitted for **up to 24 hours** after the due date.

Test: 25%

There is ONE test (90 mins) covering from Topic 1 "Introduction" to Topic 5 "Confidence Interval Estimation for the Population Mean" in **Week 9**.

Written Examination: 50% (Two hours)

Textbooks

1. Levine, D.M., Kathryn, A.S. and David, F.S. Business Statistics: A First Course, 2020, Pearson Education Limited.
2. Liu, K. I., To K. M., Speaking of Statistics, 2014, Pearson Education Ltd
3. Newbold, P., Carlson, W.L. and Thorne, B. Statistics for Business and Economic. Prentice Hall

Tentative Lecture Schedule

Schedule	Week	Reading
Topic 1: Introduction to Statistics Introduction Organizing and visualizing data Measures of central tendency Measures of variation Distribution shape Use of Excel	1-2	Le Ch 1-3
Topic 2: Basic Probability Basic probability concepts Conditional probability Counting rules	2-3	Le Ch 4
Topic 3: Discrete and Continuous Probability Distributions Discrete probability distribution Binomial distribution Continuous probability distribution Normal distribution	3-4	Le Ch 5-6
Topic 4: Sampling Distribution Introduction to sampling distribution Sampling distribution of the sample mean Sampling from normal population Sampling from non-normal population	5	Le Ch 7
Topic 5: Confidence Interval Estimation for the Population Mean Introduction to parameter estimation Confidence interval estimation for population mean with known standard deviation Confidence interval estimation for population mean with unknown standard deviation Sample size determination	6	Le Ch 8
Assignment 1 deadline	7 (on or before 5pm, March 5, 2022)	
Topic 6: Hypothesis Testing for the Population Mean Introduction to hypothesis testing Hypothesis testing for the population mean with known standard deviation Hypothesis testing for the population mean with unknown standard deviation	7-8	Le Ch 9
Test	9 (5:05 pm – 6:45 pm, March 18, 2022)	
Topic 7: Confidence Interval Estimation and Hypothesis Testing for the Population Proportion Sampling distribution of the sample proportion Confidence interval estimation for the population proportion Sample size determination Hypothesis testing for the population proportion	10	Le Ch 9
Assignment 2 deadline	11 (on or before 5pm, April 2, 2022)	
Topic 8: Simple Linear Regression Measuring the association between two numerical variables Simple linear regression model Statistical significance of a linear regression model Revision	11-12	Le Ch 12

Tentative Tutorial Schedule

Week	Date	Thu & Fri Tutorial
1	10 Jan – 15 Jan	No tutorial
2	17 Jan – 22 Jan	Topic 1: Q1 – Q6
3	24 Jan – 29 Jan	Topic 1: Q7 – Q12
Lunar New Year Holidays		
4	7 Feb – 12 Feb	Topic 2
5	14 Feb – 19 Feb	Topic 3: Q1 – Q10
6	21 Feb – 26 Feb	Topic 3: Q11 – Q17
7	28 Feb – 5 Mar	Topic 4
8	7 Mar – 12 Mar	Topic 5
9	14 Mar – 19 Mar	Topic 6
10	21 Mar – 26 Mar	Topic 7: Q1 – Q5
11	28 Mar – 2 Apr	Topic 7: Q6 – Q11
12	4 Apr – 9 Apr	Topic 8: Q1 – Q6
13	11 Apr – 14 Apr *	Topic 8: Q7 – Q16

*no tutorial on Friday. Please all
join [Thursday section](#) at 6-7pm.