THE UNIVERSITY OF HONG KONG
HKU Business School

ECON1280 – Analysis of Economic Data

GENERAL INFORMATION

Instructor:
Dr. Ping Yu
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Phone: 2857-8358
Consultation time: 11:00am-12:00noon, Thursday

Teaching time: 9:30am-12:20noon, Friday
Teaching location: KKL102/Virtual by Zoom

   ** Please send your emails to us directly from your email account instead of using the email communication
   facility in Moodle.*

Pre-requisites:
Level 2 or above in HKDSE Mathematics Module 1 or 2, or a pass in MATH1011
University Mathematics I or concurrent registration in MATH1011.

Mutually Exclusive Courses:
STAT1601 Elementary Statistical Methods
STAT1602 Business Statistics,
STAT1603 Introductory Statistics
STAT 2901 Probability and Statistics: Foundations of Actuarial Science
Note: This course is NOT open to students taking or having taken STAT2601 Probability & Statistics I.

Co-requisites: None

Course Website: Available through HKU Portal e-learning

COURSE DESCRIPTION

This course studies the measurement and interpretation of economic variables, and how to model their
relationships using appropriate empirical methods. Topics include interpretation of headline statistics,
describing economic aggregates, modeling of economic relationships and drawing conclusions from
observations.

COURSE OBJECTIVES

1. To provide a thorough understanding of basic statistical concepts and tools.

2. To apply statistical methods to real world problems.

3. To provide the essential background knowledge for ECON2280.

COURSE LEARNING OUTCOMES	
Course Learning Outcomes	Aligned Faculty Learning Goals

CLO1: Collect, summarize and present data useful for decision making.	Goal# 1, 2, 3, 5
CLO2: Estimate the parameters of variables.	Goal# 1, 2, 3
CLO3: Test hypotheses about the parameters of variables.	Goal# 1, 2, 3
CLO4: Test hypotheses using ANOVA.	Goal# 1, 2, 3
CLO5: Apply the graphical and statistical functions of Microsoft Excel or other statistical software to present and analyze data.	Goal# 1, 2, 3, 5

* Faculty Learning Goals are as follows:

FLG1 Acquisition and internalization of knowledge of the programme discipline
FLG2 Application and integration of knowledge
FLG3 Inculcating Professionalism
FLG4 Developing global outlook
FLG5 Mastering communication skills
FLG6 Cultivating leadership

COURSE TEACHING AND LEARNING ACTIVITIES

Course Teaching and Learning Activities	Expected contact hour	Study Load (% of study)
T&L1. Lectures.	36	30%
T&L2. Tutorials.	12	10%
T&L3. Self-study.	72	60%
Total	120	100%

Assessment Methods	Brief Description (Optional)	Weight	Aligned Course Learning Outcomes
A1. Assignments		50%	CLO1-5
A2. Midterm Test		20%	CLO1-5
A2. Final Exam		30%	CLO1-5
	Total	100%	

STANDARDS FOR ASSESSMENT

Grade	Course Grade Descriptor
A+, A, A-	Strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate and synthesis.
B+, B, B-	Strong evidence of ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate and synthesis.
C+, C, C-	Evidence of adequate ability to fulfill the intended learning outcomes of the course at low levels of learning; such as describe and apply, but not at high levels of learning such as evaluate and synthesis.
D+, D	Evidence of basic familiarity with the subject.
F	Little evidence of basic familiarity with the subject.

Assessment Rubrics for Each Assessment

The assignments are mainly from the textbook. The midterm and final will mimic the assignments.

Means/Processes for Student Feedback on Course

The students can provide their feedbacks through the SETL questionnaire or emailing the instructor directly.

Required/Recommended Readings & Online Materials

Required Textbook:

Statistics for Business and Economics (Global Edition, 9th edition), by Paul Newbold, William Carlson and Betty Thorne, Pearson, 2019

Note: It is your own responsibility to acquire the 9th edition of the textbook. The instructor and TA are prohibited from uploading end-of-the-chapter questions in Moodle due to copyright regulations. A copy of the textbook will be put on reserve.

COURSE CONTENT AND TENTATIVE TEACHING SCHEDULE

21 January, Describing Data: Graphical (Chapter 1)

28 January, Describing Data: Numerical (Chapter 2)

4 February, Spring Festival

11 February, Probability: Random Experiment, Rules of Probability, Bayes' Theorem (Chapter 3)

18 February, Discrete Random Variables: Binominal/Poisson/Hypergeometric Distributions (Chapter 4)

25 February, Continuous Random Variables: Normal/Exponential Distributions (Chapter 5)

4 March, Sampling Distribution Theory: Central Limit Theorem (Chapter 6)

11 March, Reading Week

13 March (Sunday), MIDTERM EXAMINATION

18 March, Hypothesis Testing: One Population (Chapter 9)

25 March, Hypothesis Testing: Two Populations (Chapter 10)

1 April, Confidence Interval Estimation: One Population and Two Populations (Chapters 7 and 8)

8 April, Nonparametric Statistics: Goodness-of-Fit Tests, Contingency Tables, Signed and Rank Tests (Chapter 14)

22 April, Analysis of Variance: One-Way and Two-Way ANOVA (Chapter 15)

29 April, Sampling: Stratified, Cluster, and Other Sampling Methods (Chapter 17)

Note: Chapters 11-13 and 16 and sections involving time series will not be covered.

COURSE POLICIES

1. Lecture PPT/PDF files will be posted on Moodle before each class. Please download and bring them to class.

2. Bring paper and be prepared to take notes in each lecture.

3. Tutorials:
   3.1 Tutorials start in the *third* week of class.
   3.2 A set of tutorial questions will be posted on Moodle one week in advance.
   3.3 You are expected to come to the tutorials ***fully prepared***, i.e. you have already worked out the problem set before attending the tutorials. In this way, you can follow better and the TA can spend time to discuss the questions with you.
   3.4 The tutorials are dedicated to working out the tutorial questions. The TA will not give you another mini-lecture to summarize precious week's lecture.

4. Assignments: **All assignments must be *typed***. This is a course policy that applies to all subclasses in all academic years. Please learn how to use LaTex or MS Word's equation editor to type equations.

5. Lecture PPTs are not designed as substitutes for the textbook or coming to class. It pays to come to class for two reasons.
  (a) Elaboration and some examples/handouts will be done only in class. You will miss a lot of material if you skip classes.
  (b) The course requires students to not only know the technical calculation but also the ability to *explain* the economic intuition of statistical concepts and empirical results to end users.

6. Microsoft Excel: You will be taught to use Microsoft Excel in this course.

7. Midterm examination policies: No supplementary midterm examination will be given. If you have a legitimate reason for missing the midterm, its weight will be added to the final exam. The only legitimate reason is sickness. If you cannot attend the midterm exam, you must inform the instructor or TA in person or via email (preferred) *before* the exam starts. In the case of sickness, you must provide a medical certificate to verify that you have sought medical treatment *prior* to the exam and that you are unfit to take the exam.

8. Do check your email regularly for course announcements from the instructor. But do not abuse the convenience of emails.
  a. Do not ask about things you are supposed to know, such as those appear in Moodle or emails from the instructor/TA.
  b. Minimize emailing your questions to the instructor/TA since it is often difficult to answer questions effectively via emails. Please go to see them in person during their office hours.

9. Classroom conduct: Be a considerate and mature person. The instructor and TA have the discretion to impose penalty in case of classroom misconduct.
  a. Do not videotape or audio record the lectures.
  b. Please observe the following good practice:
   • Come to class and return from the break on time.
   • In case you are late, minimize disruption to the class by sitting at the back.
   • If you have to leave the class early, please inform the instructor beforehand and sit close to the

door.
- Stay attentive and do not chat with your classmates.
- Use of mobile phone for *any* purposes is strictly prohibited. Remember to turn it off.

10. Academic Conduct

The University Regulations on academic dishonesty will be strictly enforced! Please check the University Statement on plagiarism on the web: http://www.hku.hk/plagiarism/
Academic dishonesty is behavior in which a deliberately fraudulent misrepresentation is employed in an attempt to gain undeserved intellectual credit, either for oneself or for another. It includes, but is not necessarily limited to, the following types of cases:

   a. Plagiarism - The representation of someone else's ideas as if they are one's own. Where the arguments, data, designs, etc., of someone else are being used in a paper, report, oral presentation, or similar academic project, this fact must be made explicitly clear by citing the appropriate references. The references must fully indicate the extent to which any parts of the project are not one's own work. Paraphrasing of someone else's ideas is still using someone else's ideas, and must be **acknowledged**.

   b. Unauthorized Collaboration on Out-of-Class Projects - The representation of work as solely one's own when in fact it is the result of a joint effort. Where a candidate for a degree or other award uses the work of another person or persons without due acknowledgement:
   (1) The relevant Board of Examiners may impose a penalty in relation to the seriousness of the offence;
   (2) The relevant Board of Examiners may report the candidate to the Senate, where there is *prima facie* evidence of an intention to deceive and where sanctions beyond those in (1) might be invoked.

Plagiarism will automatically result in at least a zero score in the plagiarized assignment or examination. Serious cases will be referred to the University's Disciplinary Committee.