#### ECON 2121B METHODS OF ECONOMIC STATISTICS

The Chinese University of Hong Kong Spring 2019

#### **Course Information**

Instructor: Chaoran GUO (cguo@cuhk.edu.hk), Esther Lee Building 1012 Office Hours: Wednesday 1:30-2:30pm or by appointment Lectures: Wednesday 2:30-5:15pm, Wong Foo Yuan Bldg LT4

Teaching Assistant: Hao GENG (isaacgeng@link.cuhk.edu.hk)

Office hours: Thursday 4-5 pm or by appointment, Esther Lee Building 1017

# **Course Description**

This course covers basic statistical concepts and their applications. Major topics include: descriptive statistics; probability distributions; sampling; estimation; hypothesis testing; regression and correlation analysis. Students should have knowledge of elementary differential and integral calculus, and are advised to take ECON1111 before taking this course.

Upon successful completion of this course, students should demonstrate their mastery of the basic knowledge of statistical concepts and techniques, develop their statistical thinking and reasoning skills, and feel comfortable in applying the statistical techniques and thinking in analyzing data.

#### Textbook

Anderson, Sweeney, Williams, Camm and Cochran, *Statistics for Business & Economics*, 13th edition, Cengage Learning.

#### Grading

Grade will be determined by class attendance (5%), problem sets (25%), midterm exam (30%) and final exam (40%). The final exam will be **cumulative**, but will emphasize materials not previously examined.

# **Key Dates**

**Problem sets**: There will be a total of 4 problem sets. Problem sets will be posted on the course website, about 1-2 weeks before they are due. The due dates will be on a class day, and problem sets are due at the <u>start</u> of class. No late problem sets will be accepted. Midterm exam: will be on Feb 27, in class.

**Final exam**: Date TBA by the University. Early departure before the end of the exam period is NOT a valid reason for absence from the final exam. Ensure that you are available on the exam dates, as exams will **NOT** be rescheduled.

**Add/Drop**: Students are advised to strictly observe the official deadline for add/drop. The department, not the course teacher, will handle every late add/drop application. Late add/drop application is rarely approved; in those rare approvals, they will be based on extremely special reasons beyond students' control. Objective and substantial proofs are required. Failure to observe the deadline or negligence in checking the official course enrollment systems will not be accepted as reasons for late drop.

### **Email Policy**

Be sure to include the course title and section number in the subject line. This would allow me to prioritize your emails. I will make every effort to respond within 48 hours on business days. Please send a reminder if you haven't heard from me after 48 hours. Email correspondence is convenient only for short questions and answers. If your questions involve mathematical calculations, please come to office hours.

# **Academic Honesty**

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations.

Details may be found at http://www.cuhk.edu.hk/policy/academichonesty.

# **Tentative Course Outline**:

The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the course materials.

Week	Date	Content
Week 1	Jan 9	<ul> <li>Data and Descriptive Statistics</li> <li>Reading assignment: Chapter 1 &amp; 2</li> </ul>
Week 2	Jan 16	<ul><li>Numerical Measures</li><li>Reading assignment: Chapter 3</li></ul>
Week 3	Jan 23	<ul><li>Introduction to Probability</li><li>Reading assignment: Chapter 4</li></ul>
Week 4	Jan 30	<ul><li>Discrete Probability Distributions</li><li>Reading assignment: Chapter 5</li></ul>
Week 5	Feb 6	<ul> <li>No Class - Public Holiday</li> </ul>
Week 6	Feb 13	<ul><li>Continuous Probability Distributions</li><li>Reading assignment: Chapter 6</li></ul>
Week 7	Feb 20	<ul><li>Sampling and Sampling Distributions (I)</li><li>Reading assignment: Chapter 7</li></ul>
Week 8	Feb 27	• Midterm Exam
Week 9	Mar 6	<ul><li>Sampling and Sampling Distributions (II)</li><li>Reading assignment: Chapter 7</li></ul>
Week 10	Mar 13	<ul><li>Interval Estimation</li><li>Reading assignment: Chapter 8</li></ul>
Week 11	Mar 20	<ul><li>Hypothesis Tests</li><li>Reading assignment: Chapter 9</li></ul>
Week 12	Mar 27	<ul><li>Inference with Two Populations</li><li>Reading assignment: Chapter 10-11</li></ul>
Week 13	Apr 3	<ul> <li>No Class - Reading Week</li> </ul>
Week 14	Apr 10	<ul><li>Analysis of Variance</li><li>Reading assignment: Chapter 13</li></ul>
Week 15	Apr 17	<ul><li>Simple Linear Regression &amp; Review for Final Exam</li><li>Reading assignment: Chapter 1-11, 13-14</li></ul>