2020 Summer Program

ECON 203 Business Statistics

Course Outline

Term: June 01-July 03,2020

Course Code: ECON 203

Instructor: Byung-Joo Lee, Visiting Professor of Economics

Home Institution: University of Notre Dame, Notre Dame, IN   46556 U.S.A.

Office Hours: TBA

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Credit: 4

Course Description:
This course introduces basic statistical concept applied to the economics data analysis. This course emphasizes the understanding of statistics and how statistics are used in the business problems. Modern business analysis requires rigorous statistical analysis to draw meaningful business conclusions. We will use economic examples to introduce statistical techniques.

This course consists of 4 sessions of 120 minutes each per week for 5 weeks. This course is very intensive and covers course content equivalent to one regular semester four credit course in U.S. university.

We will use Microsoft Excel to do various statistical analyses. Microsoft Excel is designed for spreadsheet program, but it also has good statistical data analysis functions. I will teach various Excel functions in class for the statistical analysis.

Textbook:
1. Essentials of Statistics for Business and Economics, 8th ed., Anderson, Sweeney, Williams, Camm and Cochran, CENGAGE Learning, 2018
2. Lecture slides will be provided in the class.

Prerequisite:

    1. Principles of Microeconomics and Principles of Macroeconomics, or equivalents.

Grading scale is as following with appropriate curve:

    A: 86-100%   B: 71-85%   C: 51-70%   D: 41-50%   F: Below 40%

Academic Honor Code:

The Code of Honor will be strictly applied. Honor Code pledges "I will not participate in or tolerate academic dishonesty." Students will not give or receive aid on exams. This includes, but is not limited to, viewing the exams of others, sharing answers with others, and using books or notes while taking the exam. You can collaborate to study your homework, but you have to submit your own completed homework to receive appropriate credit. Copying solutions from others, whether they are current or past, constitutes plagiarism.

Computer Program:

We will use Microsoft Excel to do various statistical analyses. Microsoft Excel is designed for spreadsheet program, but it also has good statistical data analysis functions. I will teach various Excel functions in class for the statistical analysis. Microsoft Office Excel and Power Points are required for the class.

Tentative Course Schedule

Week 1: Descriptive Statistics

Session 1: Chapter 1: Introduction: Data and Statistics

Session 2: Chapter 2: Descriptive Statistics: Tabular and Graphical Presentations

Session 3: Chapter 3: Descriptive Statistics: Numerical Measures

Session 4: TA Review Session

Week 2: Probability Distributions

Session 5: Chapter 4: Introduction to Probability

Session 6: Chapter 5: Discrete Probability Distribution

Session 7: Chapter 6: Continuous Probability Distribution

Session 8: TA Review Session

Week 3: Sampling Distribution

Session 9: Chapter 6: Continuous Probability Distribution

Session 10: **Midterm Exam: Chapters 1-6**

Session 11: Chapter 7: Sampling Distribution: *Normal dist., Central Limit Theorem*

Session 12: Exam Review Session

Week 4: Statistical Inferences

Session 13: Chapter 8: Interval Estimation

Session 14: Chapter 9: Hypothesis Testing: *z*-test, *t*-test

Session 15: Chapter 10: Inference About Means and Proportions

Session 16: TA Review Session

Week 5: Statistical Inferences on Population Variances

Session 17: Chapter 11: Inference About Population Variances: χ^2 - test

Session 18: Chapter 14: Simple Linear Regression

Session 19: TA Review Session

Session 20: **Final Exam: Chapter 7-11, 14**