Department of Economics 余朝恩
Empirical Research Methods I. Fall 2020

Syllabus

Overview. Welcome to the course of Empirical Research Methods I for the second-year students. This course surveys basic statistical concepts with realistic applications in **Economics** and **Econometrics**. This course focuses on the ideas of correctly extracting information from data analyses, which forms the bases of Data Mining and Big Data Analyses, though some calculations are inevitable. As students get better at data-analytic thinking they will develop intuition as to how and where to apply creativity and domain knowledge. Topics are as follows.

(i) What is statistics? Where can we apply it in everyday life?
(ii) The way to comprehend and characterize data? –Descriptive statistics.
(iii) The way to abstractly measure uncertainty. –Probability
(iv) The way to calculate probability under conditions. –Bayes' Rule
(v) The way to interpret realizations under uncertainty. –Random Variable
(vi) Commonly representative distributions of probability.
(vii) Applications and the usual mis-interpretations of statistical analyses.

What is this course like? This course is composed of the following characteristics.

(i) There will be at least 1 quiz every week.
(ii) There will be several in-class experiments to experience a learning-by-doing progress in understanding modern statistics.
(iii) This course focuses on how people usually incorrectly understand the results of statistical analyses, and how to correct them.