

DCC5220: Statistical Methods (Fall 2013)

General Information

Course schedule:	Thursday 13:00-14:30 and Tuesday 13:00-14:30
Course room:	203
Instructor:	Yusuke Jinnai
Office room:	114
Phone:	025-779-1401
Email:	yjinnai@iuj.ac.jp
Office hours:	Thursday 15:00-16:00 and Friday 15:00-16:00 (or by appointments)
Course TA's:	Patricia Rivera (patriver@iuj.ac.jp) Amendra Majuwana Kankanamge (kapila@iuj.ac.jp)
TA session:	Thursday 18:00-19:30 at Room 203

Course Description

This course is an introduction to probability and statistics. The course covers descriptive statistics, basic probability theory, estimation, hypothesis testing, and regression analysis. The goal of the course is to equip students with these statistical tools, which will form a basis for understanding econometric models and reading academic papers in the subsequent courses as well as using analytical methods to write own thesis.

Course Materials

Required textbook:

Wonnacott and Wonnacott (1990), *Introductory Statistics*, 5th Edition, Wiley.

Course Requirements

There will be weekly problem sets, a midterm exam, and a (cumulative) final exam with the following grading weights.

1. Problem sets 10%
2. Midterm exam 40%
3. Final exam 50%

Policy for problem sets:

- Students are expected to turn in their answers to the problem sets every week.
- Answer sheets will be collected at the beginning of the class on each due date. Late submissions will NOT be accepted.
- I encourage students to work with their classmates, but you must write up and submit your answers *individually*.
- In problem sets, you must clearly show the process of deriving your conclusions. I give credits to your *process* even when your final conclusions themselves are incorrect.
- Graded answer sheets will be returned in the following week's TA session.

Policy for exams:

- Midterm exam will be held on **12th November (Tuesday) 13:00-14:30** at *MLIC Hall*.
- Final exam will be held on **17th December (Tuesday) 13:00-15:00** at *MLIC Hall*.
- Exam questions (in both midterm and final) will be similar to the weekly problem sets.
- The exams are *closed book*, but students are allowed to bring an *A4-sheet paper* to the exams. You can write whatever you think useful to you, using the both sides of the sheet.
- In exams, you must clearly show your logic, as I give credits to your *process*.

Policy for TA sessions:

- Your graded answer sheets to the weekly problem sets will be returned in the following week's TA sessions. In the sessions, TA will also demonstrate how to solve each problem.
- You don't need to attend the sessions or you can leave earlier. But, if you have questions on grading, you must contact the TA by the end of the following day.
- Since TA sessions include TA's office hours, you can freely ask for their help during the session. If you have a specific question or help, just contact the TA directly.

Course Outline

- Descriptive statistics (Chapter 2: Oct. 3)
- Probability (Chapter 3: Oct. 3, 8)
- Discrete random variables and probability distribution (Chapter 4&5: Oct. 10, 15)
- Continuous random variables and probability distribution (Chapter 4&5: Oct. 17, 22)
- Sampling distribution (Chapter 6: Oct. 24, 29)
- Point and interval estimation (Chapter 7&8: Oct. 31, Nov. 5, Nov.12, Nov. 14)
- Hypothesis testing (Chapter 9: Nov. 19, 21, 26, 28)
- Least squares and simple regression (Chapter 11&12: Dec. 3, 5, 10)
- Multiple regression (Chapter 13: if time allows)