Basic information

- Instructor: Ryo Okui
  - Email: okui@nyu.edu
  - Office: Room 1321
  - URL: https://sites.google.com/site/okuiryoeconomics/
  - Office hour: Tuesday 10:00 - 12:00 or by appointment.
    * If you want to make an appointment, please email me.

- Time and location:
  - Monday: 14:45-16:00
  - Wednesday: 14:45-16:00
  - Location: Room 204

- Grader: Jingchao Li (jl4342@nyu.edu)
- Learning Assistant: Allison F Chesky (afc340@nyu.edu)
- Course website: NYU Classes.
  All the course materials will be uploaded to the course website. All the announce-
  ments will be done via the course website.

Course description  This course is designed to introduce students to econometric tech-
niques and their applications in economic analysis. It begins with a review of basic
statistical tools, then covers linear regression with one regressor, linear regression with
multiple regressors. It also covers panel data models, binary dependent variable, instru-
mental variables estimation and program evaluation. The emphasis is on practical issues
in econometric analysis of cross-sectional and panel data.

Pre-requisites  Some statistics course (MATH-SHU 233 OR MATH-SHU 234 OR MATH-
SHU 235 OR BUSF-SHU 101)

Textbook


Students are required to own the textbook. We will follow the textbook, but there will
be some deviations from the textbook. Students shall be informed of the materials that
are covered in the textbook but not discussed in the class, and those that are not covered
in the textbook but discussed in the class. Some of the questions in the assignments will
be from the textbook.
Statistical Software

- STATA. https://www.stata.com
  STATA will be used for computer-based calculation.

Schedule (Tentative)

- September 4 (Monday): Course outline and review of probability (Chapter 2)
- September 6 (Wednesday): Review of probability (Chapter 2)
- September 11 (Monday): Review of statistics (Chapter 3)
- September 13 (Wednesday): Review of statistics (Chapter 3)
- September 18 (Monday): Linear regression model: Estimation (Chapter 4)
- September 20 (Wednesday): Linear regression model: Inference (Chapter 5)
- September 25 (Monday): Computer session
- September 27 (Wednesday): Multiple regression model: Estimation (Chapter 6)
- October 9 (Monday): Multiple regression model: Inference (Chapter 7)
- October 11 (Wednesday): Multiple regression model: Inference (Chapter 7)
- October 16 (Monday): Computer session
- October 18 (Wednesday): Nonlinear regression model (Chapter 8)
- October 23 (Monday): Nonlinear regression model (Chapter 8)
- October 25 (Wednesday): Review
- October 30 (Monday): Midterm
- November 1 (Wednesday): Internal and external validity (Chapter 9)
- November 6 (Monday): Computer session
- November 8 (Wednesday): Panel data (Chapter 10)
- November 13 (Monday): Panel data (Chapter 10)
- November 15 (Wednesday): Binary dependent variable (Chapter 11)
- November 20 (Monday): Instrumental Variable Estimation (Chapter 12)
- November 22 (Wednesday): Computer session
- November 27 (Monday): Program evaluation (Chapter 13)
- November 29 (Wednesday): Program evaluation (Chapter 13)
- December 4 (Monday): Student presentation
- December 6 (Wednesday): Student presentation
• December 11 (Monday): *Student presentation*

• December 13 (Wednesday): Review

Note that there is no class on October 2nd, Monday and October 4th, Wednesday, (National day and mid-autumn fall festival holidays).

**Requirements** Students must do a presentation and take the final exam in order to obtain a grade.

The course score, on which the final grade is based, will be determined by

\[ T = \max \left( \frac{2}{5} T_F + \frac{3}{10} T_M + \frac{1}{5} T_A, \frac{9}{10} T_F, \frac{36}{70} T_F + \frac{27}{70} T_M, \frac{3}{5} T_F + \frac{3}{10} T_A \right) + \frac{1}{10} T_P, \]

where \( T_F \) is the final exam score, \( T_M \) is the midterm score, \( T_A \) is the total score from the assignments, and \( T_P \) is the score from the presentation.

• Assignments (20%):

  There will be 9 assignments. Students are encouraged to form study groups. However each student has to submit her/his own solution.

  – Assignment 0 (0%): It is not mandatory at all to submit this assignment. Submitted assignments will be graded but the score of this assignment does not contribute to the final grade at all. The deadline is September 13th.

  – Assignment 1 (2.5%): The deadline is September 20th.

  – Assignment 2 (2.5%): The deadline is September 27th.

  – Assignment 3 (2.5%): The deadline is October 11th.

  – Assignment 4 (2.5%): The deadline is October 18th.

  – Assignment 5 (2.5%): The deadline is November 8th.

  – Assignment 6 (2.5%): The deadline is November 15th.

  – Assignment 7 (2.5%): The deadline is November 22th.

  – Assignment 8 (2.5%): The deadline is November 29th.

Each assignment must be submitted by the end of the class on the due day.

No late submission is allowed.

• Student presentation (10%):

Students are required to do a presentation on a topic from the list prepared by the instructor. Each topic will be presented by a group of students and the group size will be determined by the number of students in the class. The grade will be determined by peer review and the evaluation of the instructor.

• Midterm exam (30%): The midterm exam will cover the materials corresponding to Chapters 1-8 of the textbook.

  – Date (Tentative): October 30th (Monday).

  – Time: 14:45-16:00.

  – Venue: Room 204.
– You can bring one A4 paper. The contents of this A4 paper can be anything. Both sides can be used.

There will be no make-up exam for the midterm.

• Final Exam (40%): The final exam will cover the materials corresponding to Chapters 9-13 of the textbook. Note that materials in Chapters 9-13 cannot be understood without good understanding of materials covered in the midterm.
  – Date: December 21st.
  – Time: 14:00-17:00
  – Venue: TBA
  – You can bring one A4 paper. The contents of this A4 paper can be anything. Both sides can be used.

The numbers in the parentheses are for the case in which a grade is determined by all of the four requirements.

Class policy

• Attendance Policy: Students are expected to attend all classes, although attendance is not a part of the final grade. In general, students shall be responsible for any problem caused by being absent from a class.

  Students who anticipate being absent because of any religious observance should, whenever possible, notify faculty in advance of such anticipated absence.

• Late submission: No late submission of assignment will be accepted.

• Make-up policy: There will be no make-up for the midterm exam. A make-up exam for the final exam will be offered only if there is a legitimate reason for missing the final exam.

• Academic Honesty: Students are expected to read and understand the university’s policy on academic integrity as laid out in the Undergraduate Bulletin. Plagiarism and cheating will not be tolerated and will be penalized.

• Students with Disabilities: The Henry and Lucy Moses Center for Students with Disabilities (CSD) in New York determines qualified disability status and assists students in obtaining appropriate accommodations and services. CSD operates according to an Independent Living Philosophy and strives in its policies and practices to empower each student to become as independent as possible. Their services are designed to encourage independence, backed by a strong system of supports. Any student who needs a reasonable accommodation based on a qualified disability is required to register with the CSD for assistance. They should contact the Director of the Academic Resource Center, Cydney Delia (cydney.delia@nyu.edu) for assistance in registering.