

Hunter College

General Linear Models I

Course Information

Class Information

Meeting days/times: Wednesday / 7:35 - 9:25 pm

Location: 922 Hunter East

Instructor

Jiangtao Gou, Office 928 Hunter East

Office hours: Monday 2:00 - 4:00 pm

E-mail: jiangtao.gou@hunter.cuny.edu

Prerequisites

The formal prerequisites for this course are relatively modest: a good background in calculus, some basic ideas of real analysis (e.g., the concept of a limit), and a basic understanding of linear algebra. It is also helpful to have some familiarity with elementary probability theory and statistical methods (e.g., simple linear regression).

Learning Outcomes

This course is designed to provide students with a fundamental understanding of the theory and application of the general linear model and generalized linear model. At the end of the course, students are expected to be able to derive basic regression equations, understand and verify the assumptions of all models, perform appropriate transformations and diagnostics, and interpret and explain the application of the GLM using real data.

Reference books

1. Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models, 2nd edition, by Julian J. Faraway.
2. Linear Models with R, 2nd edition, by Julian J. Faraway.
3. An Introduction to Generalized Linear Models, 3rd edition, by Annette J. Dobson & Adrian G. Barnett.
4. Generalized Linear Models, 2nd edition, by P. McCullagh & J. A. Nelder.

Homework

Homework problems will be assigned weekly and must be turned in at the beginning of the class on the following Wednesday. Late homework will not be accepted.

Exams

There will be no remake for the midterms and final.

Midterm (**take-home**): November 16 - 30

Final Exam (comprehensive): Wednesday, December 21, 7:35 - 9:25 pm (Final Exam Schedule Fall 2016, Office of the Registrar)

Final exam is **open book** and **open notes**. Calculators and formula sheets are allowed. You may bring a laptop as well.

Grading

Homework: 30%

(If the lower score is at the Midterm) Midterm : 30%, Final: 40%

(If the lower score is at the Final Exam) Midterm: 40%, Final: 30%

If you are absent more than 2 times, you will lose 0.5% from your final grade for each additional absence.

Extra Credit (5%): Lecture Notes

Note-taking is an active part of the learning process that requires you to quickly digest the lecture material and write down its key elements in a manner that suits your learning style. In order to get the extra credits, please scan your lecture notes as a single pdf file and upload the notes onto Blackboard. If the notes is complete (or almost complete) and well-organized, a 4% extra credit will be given.

Software

R

Credit/No Credit

You need to submit the CR/NC form to me before the final exam if you decide to get a CR/NC grade for this course. Please check with the Office of the Registrar for more details.

Other Notes

College's policy on academic integrity: "Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures."

College's statement on students with disabilities: "In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/or Learning) consult the Office of AccessABILITY located in Room E1124 to secure necessary academic accommodations. For further information and assistance please call (212-772-4857)/TTY (212-650-3230)."

Please Note: The instructor reserves the right to evaluate special requests or circumstances. The instructor may make modifications to the syllabus and/or outline during the course. Students will be notified of any changes.