

Course Information for STAT:5200 “Applied Statistics I” Fall 2018

Times and Locations

Lectures: Monday, Wednesday, Friday 12:30 – 1:20 pm in 31 SH

Lab: Friday 1:30 – 2:20 pm in 41 SH

Prerequisites

STAT:3101 or equivalent, and knowledge of matrix algebra

Corequisites

STAT:4100 or STAT:5100

Instructor

Professor Dale Zimmerman, a.k.a. “Dr. Z,” 217 SH, Phone 335-0818,

E-mail dale-zimmerman@uiowa.edu

Office Hours

10:30 am – noon, Tuesday and Thursday; or by appointment

Department Executive Officer

Professor Joseph Lang, Office 241 SH, Phone 335-0712, E-mail joseph-lang@uiowa.edu

Textbook

The required textbook for this course is *Introduction to Regression Modeling*, by Abraham and Ledolter, which is available at University Book Store. We will cover Chapters 1-7 thoroughly and, as time permits, parts of Chapters 8-12. Reading assignments from the text will be made at the beginning of each lecture period.

ICON

ICON will be used for posting grades, homework and exam solutions, etc.

Course Objective

The main topic of this course is regression analysis, which involves modeling data plus accompanying diagnostic methods (to see if the model fits well) and statistical inference (to see what we can infer from the fitted model about the population from which the data have been collected). This is an applied statistics course, so some of your work will involve data analysis, computing, and communicating statistical results. On the other hand, this is a graduate-level statistics course, so it is important to thoroughly understand the theory behind the methods used; therefore we will cover the material in some technical depth.

Lab

We will use the statistical language R for this course, which can be downloaded from <http://cran.us.r-project.org/> and is installed in the lab. Attendance in the labs is

mandatory and important for your success in this course. This is where you will learn how to use R under Linux, and use it for your homework assignments and project.

Homework assignments

I will give weekly homework assignments covering both theory and applied problems. I will usually assign the homework on Wednesday and it will be due in class the following Wednesday. Apart from illness and family emergencies, credit will not be given for late work. You can discuss homework assignments with me or with other students, but your final write-up should be from your own understanding. Assignments may be either handwritten or typewritten, with appropriate R code, figures, and computer-generated results included by “cutting and pasting.”

Exams

There will be two 50-minute midterm exams, given in class in late September and early November. There will be a two-hour final exam at a time during finals week to be determined later. The final exam is not comprehensive; it will cover material presented in class that was not included in the coverage of the two midterms. All exams will be closed-book, but you may use an 8.5-inch by 11-inch handwritten formula sheet (both sides). Calculators may be used for exams, and any necessary statistical tables will be provided. If an exam is missed, a make-up exam will be permitted only if the circumstances of missing the exam satisfy university policies.

Project

The final project will consist of either a comprehensive multiple linear regression analysis of a set of data or a simulation study. Instructions for the project will be handed out by November 16. The project will be due by 5 pm, Friday, December 7.

Grading

- Homework and Participation, 15%
- Midterm Exams, 40% (20% each)
- Final Exam, 30%
- Final Project, 15%

Plus-minus grading will be used.

Classroom Environment

Activities in class which are unacceptable are (1) prolonged conversation with a fellow student, (2) the use of cell phones, and (3) the use of laptops/tablets etc. Please remember to switch your cell phones to silent mode before class starts and put away laptops/tablets/phones etc. when in class.

Administrative Home

The College of Liberal Arts and Sciences (CLAS) is the administrative home of this course and governs its add/drop deadlines, the second-grade-only option, and other policies. These

policies vary by college (<https://clas.uiowa.edu/students/handbook>).

Electronic Communication

Students are responsible for official correspondences sent to their UI email address (uiowa.edu) and must use this address for all communication within UI (Operations Manual, III.15.2).

Accommodations for Disabilities

UI is committed to an educational experience that is accessible to all students. A student may request academic accommodations for a disability (such as mental health, attention, learning, vision, and physical or health-related condition) by registering with Student Disability Services (SDS). The student should then discuss accommodations with the course instructor (<https://sds.studentlife.uiowa.edu/>).

Nondiscrimination in the Classroom

UI is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University's Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity at diversity@uiowa.edu or diversity.uiowa.edu.

Academic Integrity

All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty. Misconduct is reported to the College, resulting in suspension or other sanctions, with sanctions communicated with the student through the UI email address.

CLAS Final Examination Policies

The final exam schedule for each semester is announced around the fifth week of classes; students are responsible for knowing the date, time, and place of a final exam. Students should not make travel plans until knowing this final exam information. No exams of any kind are allowed the week before finals. (<https://clas.uiowa.edu/faculty/teaching-policies-resources-examination-policies>.)

Making a Complaint

Students with a complaint should first visit with the instructor or course supervisor and then with the departmental executive officer (DEO), also known as the Chair. Students may then bring the concern to CLAS (<https://clas.uiowa.edu/students/handbook/student-rights-responsibilities>).

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment

must be reported immediately. For assistance, definitions, and the full University policy, see <https://osmrc.uiowa.edu/>.