Policies relating to this course are governed by the College of Liberal Arts and Sciences.

1 General Information

Instructor: Kate Cowles, 374 SH, 335-0727
kcowles@stat.uiowa.edu
Office hours: T 1:30 - 2:20 p.m.
W 12:30 - 1:20 p.m.
Th 1:30 - 2:45 p.m.
Please feel free to make appointments to see me outside of office hours, and to send me questions by e-mail.

Department: Statistics and Actuarial Science, 241 SH
DEO: Dr. Luke Tierney, 241 SH, 335-0712
luke-tierney@uiowa.edu

Lectures: M, W, F 140 SH
10:30-11:20

Lab: Will replace 1 lecture every other week 41 SH
Handouts, homework assignments, datasets, etc. will be posted on the web page for you to download.


2 Course goals and objectives

Through hands-on experience with real data from a wide variety of applications, students will learn basic methods required for data analysis and interpretation. The emphasis will be on formulating questions, choosing appropriate statistical techniques for a given problem, verifying whether the assumptions behind the techniques are met by the dataset, drawing appropriate conclusions from the analysis, and communicating the results. Students will learn the basics of SAS, a statistical software package that is widely used in business, industry, government, and research.

3 Evaluation of students

3.1 Homework

In general, homework will be assigned each Fri. and will be due in class the following Fri. Exceptions to this schedule will be announced in class.

Show your work when solving written homework problems. For computer problems, turn in printouts of your commands or programs and their output.

You are encouraged to study with others. However, if you do work with others on homework assignments, please: a) write up your own assignment and make sure you completely understand all solutions that you submit, and b) write the names of the others in your study group on your assignment.

Late homework is accepted only as required by university policy, i.e. due to “illness, mandatory religious obligations, or other unavoidable circumstances or University activities.”

3.2 Exams

There will be three 1-hour midterm exams and one comprehensive 2-hour final. The midterms will be given in the classroom during a regular lecture period. Students may bring one 8-1/2 x 11 in. sheet of paper with notes to each midterm, and may bring three sheets to the final exam.

Midterm 1 week of 2/25
Midterm 2 week of 3/31
Midterm 3 week of 4/28
Final exam Monday, 5/12 2:15 p.m.

Missed exams may be made up only with documentation of reasons required by university policy (see “Late Homework” above).

3.3 Projects

Students will work in groups of three to carry out projects involving application of the statistical methods covered in the course to problems of their own choosing. I will be happy to work with you at each stage of your project. Each group of students will:

- Formulate a research question
- Obtain a dataset that can be used to address this question; you may
– collect your own data,
– obtain a dataset from the web, from a book, from an instructor in your major field, or from some other source, or
– see me for a choice of datasets
• determine an appropriate method of analysis
• use SAS to check the data
• use SAS to carry out the analysis
• report and interpret the results

I will expect more sophisticated projects from graduate students and other students registered for 22S:105.

Projects will be carried out in three phases. Please meet with me at least once while you are working on each phase.

• Project proposal (due 4/07) This is a detailed description of what you plan to do, including question(s) to be addressed, dataset to be used, methods to be applied. Also specify your intended method of presentation for the final project. (See below.)

• Project interim report (due 4/21) This informal report will indicate that your project is “on track.” All computing should be done. Turn in code and output, and a brief summary (hand-written is O.K.) of what the results mean and what remains to be done.
In addition, include an itemized list of what specific tasks each member of the project team has done to date on the project.

• Project presentation (must be posted or submitted by 5/05)
Projects must be finalized in a form that can be shared with the entire class, such as:
– posting a document on the course web page
– preparing a poster
– giving an oral presentation with overheads, slides, or computer images

Posters and oral presentations will be given in class during the week of 5/02.

Along with the final project, the team must turn in an itemized list of each person’s contributions to the project.

3.4 Grading

The course components will be weighted as follows:

Homework 10%
Midterms 42% (14% each)
Project 20%
Final 28%

4 Resources for additional help

Extra Help: The Statistics Tutorial Lab, located in 202 CC, gives free tutorial assistance to students in 22S:2, 8, 25, and 39. In addition, several graduate students have volunteered to independently tutor students in various 22S: courses at mutually-arranged times and fees. Please check the web site www.stat.uiowa.edu/courses/tutoring.html for tutoring details.

5 College of Liberal Arts and Sciences: Policies and Procedures

5.1 Administrative Home of the Course

The administrative home of this course is the College of Liberal Arts and Sciences, which governs academic matters relating to the course such as the add/drop deadlines, the second-grade-only option, issues concerning academic fraud or academic probation, and how credits are applied for various graduation requirements. Different colleges might have different policies. If you have questions about these or other CLAS policies, visit your academic advisor or 120 Schaeffer Hall and speak with the staff. The CLAS Academic Handbook also contains important CLAS academic policies:
www.clas.uiowa.edu/students/academic_handbook/index.shtml

5.2 Academic Fraud

Plagiarism and any other activities that result in a student presenting work that is not his or her own are academic fraud. Academic fraud is reported to the departmental DEO and then to the Associate Dean for Academic Programs and Services in the College of Liberal Arts and Sciences who deals with academic fraud according to these guidelines:
www.clas.uiowa.edu/students/academic_handbook/ix.shtml

5.3 Making a Suggestion or a Complaint

Students have the right to make suggestions or complaints and should first visit with the instructor, then with the course supervisor if appropriate, and next with the departmental
5.4 Accommodations for Disabilities

A student seeking academic accommodations first must register with Student Disability Services and then meet with an SDS counselor who determines eligibility for services. A student approved for accommodations should meet privately with the course instructor to arrange particular accommodations. www.uiowa.edu/~sds/

5.5 Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. Visit www.sexualharassment.uiowa.edu/ for definitions, assistance, and the full policy.

5.6 Reacting Safely to Severe Weather

The University of Iowa Operations Manual section 16.14 outlines appropriate responses to a tornado (i) or to a similar crisis. If a tornado or other severe weather is indicated by the UI outdoor warning system, members of the class should seek shelter in rooms and corridors in the innermost part of a building at the lowest level, staying clear of windows, corridors with windows, or large free-standing expanses such as auditoriums and cafeterias. The class will resume, if possible, after the UI outdoor warning system announces that the severe weather threat has ended.

5.7 Student Classroom Behavior

The ability to learn is lessened when students engage in inappropriate classroom behavior, distracting others; such behaviors are a violation of the Code of Student Life. When disruptive activity occurs, a University instructor has the authority to determine classroom seating patterns and to request that a student exit the classroom, laboratory, or other area used for instruction immediately for the remainder of the period. One-day suspensions are reported to appropriate departmental, collegiate, and Student Services personnel (Office of the Vice President for Student Services and Dean of Students). University Examination Policies

5.8 Missed Exam Policy

University policy requires that students be permitted to make up examinations missed because of illness, mandatory religious obligations, certain University activities, or unavoidable circumstances. Excused absence forms are required and are available on the Registrar web site.

5.9 Final Examinations

An undergraduate student who has two final examinations scheduled for the same period or more than three examinations scheduled for the same day may file a request for a change of schedule before the published deadline at the Registrars Service Center, 17 Calvin Hall, 8-4 M-F, (384-4300).

6 Course schedule

This approximate schedule will be updated as needed during the semester.

1/23 - 1/25 Chapter 1, 2
1/28 - 2/01 Chapter 3
lab 1/30
2/04 - 2/08 Chapter 4, 5
lab 2/06
2/11 - 2/15 Chapter 5, 8
2/18 - 2/22 Chapter 9
lab 2/20
2/25 - 2/29 Chapter 10-11, midterm 1
3/03 - 3/07 Chapter 14, 15
lab 3/05
3/10 - 3/14 Chapter 15, 16
3/17 - 3/21 Spring Break
3/24 - 3/28 Chapter 16, 18
lab 3/26
3/31 - 4/04 Chapter 18, midterm 2
4/07 - 4/11 Chapter 19, 20
Project proposals due 4/07
lab 4/09
4/14 - 4/18 Chapters 20, 21, 23
4/21 - 4/25 Chapter 23, 25
Project interim reports due 4/21
lab 4/23
4/28 - 5/02 Chapter 24, midterm 3
5/05 - 5/09 chapter 26, project presentations
Projects due 5/05
lab 5/07
5/12 2:15 p.m. Final Exam