

College Of Human Ecology
Cornell University,
Ithaca, New York 14853

Department of Policy Analysis and Management

PAM 2100 Introduction to Statistics (Lecture 4)

**Fall
2008**

Instructor: A. Sinan Ünür
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Office Hours: TBA
Lecture: TR 10:10 AM - 11:25 AM MVR G71

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Office Hours: TBA on the course web site

Sections: 209: T 12:20 PM - 01:10 PM STL 235
210: F 01:25 PM - 02:15 PM MVR 157
211: F 11:15 AM - 12:05 PM CLD 250
212: W 09:05 PM - 09:55 PM KND 103

Academic Accommodations

Students with disabilities are entitled to equal access in all university programs and activities. Students with disabilities should work with Student Disability Services (SDS) (clt_sds@cornell.edu) to determine their best strategies for insuring access. The SDS website is <http://www.clt.cornell.edu/>. SDS will provide you with an accommodation letter. Please provide me with a copy of that letter by **February 1st** to enable me to work out with you the logistics of appropriate academic accommodations.

Course Objectives

Facts and figures do not speak for themselves. They need to be put in context and interpreted in a structured fashion. The discipline of statistics is concerned with the collection, analysis, interpretation, and reporting of data. As future researchers, policy-makers and managers, you will regularly be called upon to present and analyze data, make inferences based on your and others' analysis and communicate your results with others. A critical understanding of both the power and limitations of statistical methods is essential. In this course, you will gain a solid understanding of the fundamental concepts and tools of statistical analysis.

Textbook

David S. Moore and George P. McCabe, *Introduction to the Practice of Statistics* (6th edition), Freeman.

For your information: An online version of the textbook is available from the publisher at <http://www.ebooks.bfwpub.com/ips6e>. In addition to the ebook, the publisher also has a free support web site at <http://bcs.whfreeman.com/ips6e/> where you can find extra material and possibly useful material. Purchase of the ebook or enrollment on the support web site are *not* required for this class.

Course Web Site

All announcements and assignments, including homework, sections, answer sheets, and readings, will be posted on the course web page. You are expected to check the web site regularly for announcements and updates.

To access the course web site, go to <http://blackboard.cornell.edu/>. You need to create an account if you do not already have one on Cornell's Blackboard server. Then add this course to the courses you are taking (course id: pam210-Unur).

Software

You are not required to use any specific software package for this class. However, some of the hands-on questions in the textbook and some homework assignments will require you to utilize computer software capable of doing statistical calculations and graphing data in various forms.

I strongly recommend that you obtain a copy of Minitab R15 which is available to Cornell students free of charge. To download and install this software, go to <http://www.cusoftware.cornell.edu/cusoftware/purchase/minitab.cfm>.

Unfortunately, at this time, no good introductory level statistics package is available for Mac OS X systems at Cornell. However, Minitab R15 is available in a number of labs across the campus, so that should alleviate any potential hardships.

Your textbook also comes with a CDROM which includes supplementary resources. I urge you to explore these tools.

Sections

Discussion sections will be conducted by the teaching assistants for this class. Both are very experienced and helpful. Section time will be used to answer *your* questions about course material. Come to section prepared with your questions so as to make the most of the time you spend there.

Assessment Test

There will be a short test in class on Thursday, September 4th to help me assess your math. Your score on this test will count towards 1% of your letter grade in this class. The test will consist of 17 multiple choice questions. *Please do not miss this test.*

Attendance

Regular attendance, note-taking and participation are crucial factors in determining your success in this class. We will take attendance in every lecture and section. To get full attendance credit, you need to attend at least 2/3 of all lectures throughout the semester. If your attendance falls short of 2/3 of all lectures, your attendance credit will be pro-rated.

Homework Assignments

There will be 2 or 3 homework assignments throughout the semester. These assignments will be announced on the course web site at least a week before they are due. Answers will be posted on the course web site following the due date.

Late submissions will not be accepted. *Do not wait until the last minute to download the problem set from the web site.* You may not submit your completed problem set by email: You need to turn in a hard copy by the deadline.

You are allowed to work on each problem set in groups of at most five people. If the completed problem set represents the work of a group of students, then the name of each student in the group must be on the cover sheet of the problem set. If you wish to form such a group, the dynamics of all group interactions are your responsibility.

Whether working as a group or individually, you may discuss your answers with anyone you wish. However, the final product must represent your own work.

Office Hours

The staff of PAM 210 offer regular office hours. We can help with improving your understanding of material presented in class and sections as well as help you with various assignments. Regular office hours will be announced on the course web site on Friday, September 5th. You do not need to make an appointment to attend regular office hours. Be advised that the times we can meet outside of regular office hours are limited and we may schedule more than one person at the same time.

Exams

There will be two prelims and a final examination. All exams are *cumulative*. Exams will be conducted according to the schedule determined by the university. ***Enrollment in the course means that you agree to take the exams on those days; you should not take this course if you have an exam conflict.*** If you miss an exam, you *might* qualify for a makeup. Due to logistical constraints, make-up exams are conducted final exam period. Reasons you might qualify for a makeup include:

- **Illness**: You need official written medical documentation that you could not perform on the day of the exam. A confirmation of visit from Gannett is not sufficient.
- **Family Emergency**: An official memo from the Dean's office of your college will automatically inform all professors on your schedule.

- Involvement in University Sponsored Off-Campus Events: Examples include athletics, club activities, etc. The activity must be sponsored by Cornell University: For example, *volunteering for your favorite charity or political candidate does not count as a valid excuse*. You will need to inform Professor Ünür of the impending conflict as soon as possible, and you will need to provide a note from your coach or the faculty advisor of your group. The note should identify you by full name and Cornell Net ID and should also indicate that this excuse is valid for PAM 2100.
- Observation of Religious Holidays: You should notify Professor Ünür in writing by **September 15th** if you are going to miss a preliminary exam due to religious reasons. Your request may be denied if you fail to provide advance notice of the conflict.
- *Job interviews, family events (such as weddings), vacation and/or other travel plans are NOT acceptable reasons to miss an exam.*

Unexcused absences will earn you a 0 (zero) on the missed exam.

Cornell University Code of Academic Integrity

The University Faculty Senate has developed a Code of Academic Integrity that governs all student academic activities. Absolute integrity is expected of every Cornell student. A Cornell student's submission of work for academic credit indicates that the work is the student's own. All outside assistance shall be acknowledged. For the specifics of this code of conduct, see <http://web.cornell.edu/UniversityFaculty/docs/AIC.pdf>.

Grading Scheme

Homework assignments	Due dates TBA	7%
Attendance	Throughout the semester	7%
Quizzes	Throughout the semester (4 or 5)	7%
Assessment test	Thursday, September 4 th 10:55 am – 11:25 am (Last 30 minutes of class)	1%
Prelim 1	Thursday, October 2 nd , 7:30 pm – 9:30 pm	23%
Prelim 2	Thursday, November 6 th , 7:30 pm – 9:30 pm	23%
Final	Thursday, December 18 th , 2:00 pm – 4:30 pm	32%
Total:		100%

Your scores will not be curved. Your letter grade will be determined based on the total points you earned through the semester according to the following table:

	Letter Grade
90% or more	A range
80% to 89%	B range
70% to 79%	C range
60% to 69%	D range
Less than 60%	F range

Course Outline

Note that this outline is subject to revision as the semester progresses.

- Probability and Randomness, Chapter 4
- **Assessment test in class on September 4th**
- Continue with Chapter 4
- Descriptive statistics: Chapter 1. Graphs, numerical measures of center and spread, density curves and the normal distribution
- Descriptive statistics: Chapter 2. Relationships, scatter plots, correlation, regression, *correlation is not causation*
- Producing data: Chapter 3. Experiments and sampling, sampling design, toward inference
- **Prelim 1 on October 2nd**
- Sampling Distributions: Chapter 5
- Inference: Confidence intervals, statistical significance. Sections 6.1 – 6.3
- Power and inference as a decision. Section 6.4.
- Inference: Mean of a population, comparing two means. Chapter 7
- **Prelim 2 on November 6th**
- Inference: Single proportion, comparing two proportions. Chapter 8
- Inference: Two-way tables, Chapter 9
- Inference: Regression, Chapter 10
- Inference: One way ANOVA, Chapter 12
- Other topics
- **Final Exam on December 18th**

All exams are cumulative.