

Introduction to Statistical Methods — Stat 2000, Section 001, Spring 2010

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http://www.math.usu.edu/~symanzik/teaching/2010_stat2000/stat2000.html
Office hours: MWF 12:00noon-1:00pm and by appointment.

Classes & Rooms: MWF 9:30am – 10:20am, Mo 1/11 – Fr 4/30, 2010: ENGR 103.

Text: *Introduction to the Practice of Statistics, Sixth Edition*
by Moore/McCabe/Craig (2009), W. H. Freeman and Company, New York.

Course Objectives:

- 1) Develop statistical thinking.
- 2) Develop problem-solving skills.
- 3) Understand basic statistical concepts and inference.

Topics:

1. Introduction to statistical concepts.
2. Graphical techniques.
3. Probability.
4. Distributions.
5. Estimation.
6. One and two sample testing.
7. Chi-square tests.
8. Simple linear regression.

Course Requirements:

- 0) **Prerequisite:** C- or better in MATH 1050 or Math ACT score of at least 23 (Math SAT score of at least 540) within the Math prerequisite acceptability time limit; or satisfactory score on Math Placement Test. Basic computer skills, in particular the ability to access and use the World Wide Web, are highly desirable.
- 1) **Class Attendance:** You are responsible for all material assigned as required reading and/or presented in lecture.

2) **Homework:** Assignments will be posted on the Web every week at:

http://www.math.usu.edu/~symanzik/teaching/2010_stat2000/stat2000.html

Homework will be collected in class in the following week. Homework mailed in, sent by FAX, or sent by e-mail by the due date will be accepted as well. In general, late homework will not be accepted. There are 12 assignments (30 points each). However, only your best 10 homework assignments will contribute to your course grade. This way, you can miss to turn in two entire homework assignments without hurting your overall course grade. Homework assignments are worth a total of 30% (300 points) of your course grade.

Be **guaranteed** that each midterm contains **at least one** of the previous homework exercises. If you like, you may work in groups on the homework assignments. In fact, you are encouraged to do so. However, each person must turn in an individual homework solution sheet. Photocopies are not permitted and will result in 0 points. Identical computer printouts will result in 0 points for everyone with the same printout — so do not share your printouts and make sure to not leave them at a public printer where they can be collected by someone else.

3) **Recitation and Tutoring Sessions:** The department will offer a large number of additional (voluntary) recitation and tutoring sessions. Although the attendance of these sessions is voluntary, you will be awarded extra credit points — and you will be more likely to pass this course and obtain a better grade if you attend these sessions on a regular basis. More details on these sessions will be provided in the second week of the semester.

4) **Software:** This course will not focus on any particular statistical software package. Instead, we will make use of software and teachware available on the Web and on the accompanying CD at many occasions. You can use any statistical package you want for the homework assignments. However, you have to understand concepts and ideas for the midterms and the final to be able to do some of the calculations and plots manually.

5) **Midterms:** There will be two 200 point 50min midterms on Fr 2/12 and Fr 3/26. In case you miss a midterm (or the final) and want to take a make-up midterm/final, you have to provide a verified document that shows the reason for your absence on the exam day, e.g., if you are sick, see a doctor and let him/her verify your visit. If you can't make the midterm/final due to job-related circumstances (e.g., travel), talk to me in person **before** the exam (I may ask you to provide me with airline tickets and hotel bills in your name). If you have no verified document, there is no way to make up for a missed midterm/final.

In any case, please contact me as soon as possible if you cannot participate in an exam (best if in advance) and make sure to obtain the required verification document that will allow you to take a make-up exam.

6) **Final:** There will be a 2-hour, 300 point comprehensive final exam, on Wed 5/5 from 9:30am through 11:20am. Everyone has to take the final exam.

7) **Americans with Disabilities Act:** If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examination, etc. must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats — large print, audio, diskette or Braille.

Important Dates:

Classes: There are no classes on Monday 1/18 (Martin Luther King Day) and from Monday 3/15 to Friday 3/19 (Spring Break). The class from Monday 2/15 (Presidents' Day) will be held on Tuesday 2/16.

Homework posted on Web: Typically every Friday between 1/15 and 4/23. Exceptions will be announced in class (12 assignments overall).

Homework due: Typically each following Friday. Exceptions will be announced in class and due dates will be listed on each assignment sheet.

Midterms: Friday 2/12 and Friday 3/26 (50min in class).

Final: Wednesday 5/5 from 9:30am through 11:20am (2 hours).

Grading System:

Final	30%	300 pts
Midterms	2 x 20% = 40%	2 x 200 pts = 400 pts
Homework	30%	best 10 x 30 pts = 300 pts
Total	100%	1000 pts

Stat 2000 grades on average are lower than for many other classes. In the recent past, there were about 40% of Ds and Fs awarded. To obtain a better outcome this time, the department is offering extensive recitation and tutoring sessions. Even though attending these sessions is voluntary, it is strongly suggested to attend those sessions whenever possible to obtain a better grade (or at least a passing grade)! And, don't forget, there will be extra credit points!

The above schedule and procedures in this course are subject to change in the event of extenuating circumstances.