

Introduction to Statistics — Stat 1040, Section 003, Spring 2002

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Text: *Freedman, Pisani, Purves: "Statistics", Third Edition, W.W.Norton & Company, 1998.*

Also Recommended: Bound packet of copies of old exams and additional examples, available at the bookstore later this week (or early next week).

Classes: MWF 10:30am – 11:20am (Mo, January 7 – Fr, April 26, 2002).

Room: **FAV 262**

Office Hours: MWF 9:00am – 10:00am and by appointment.

Topics:

- Design of experiments: controlled experiments and observational studies
- Descriptive statistics: histograms, the average, the standard deviation
- The normal approximation for data
- Correlation and regression
- Brief introduction to probability
- The law of averages, the central limit theorem
- Sample surveys, chance errors in sampling
- Chance models: examples
- Tests of significance
- Use and misuse of statistical graphics

Quizzes: Every Friday (except January 11: First Week of Classes, February 15: Midterm 1, February 22: Olympic Break, and March 29: Spring Break), the first 10 minutes of class will consist of a brief quiz on the material covered up to the previous Wednesday. These quizzes will consist of two questions. Usually, one question will be a fairly straightforward calculation, while the other will generally be more conceptual, generally requiring a short answer of several sentences. These will be closed-book and closed-note, but formulas will be provided. You should prepare for these by doing the exercises from the book. Calculators may be necessary. Each quiz will be graded out of 20 points. No make-ups will be permitted, but at the end of the semester, your two lowest scores will be dropped. Overall, there will be 12 quizzes.

Midterms: The 2 midterms and the final exam will be *closed* book and calculators are required. Calculators such as the TI-85 will not be allowed unless the memory has been cleared. Exam policy is *no makeups* unless you have a very good reason and notify the instructor *in advance* that you will not be able to attend a scheduled exam.

First Midterm:	approximately Chapters 1-12	Friday, February 15, in class
Second Midterm:	approximately Chapters 13-23	Wednesday, March 27, in class

Final Examination: There is a common final exam for *all* sections of Stat 1040. The exam will be on Tuesday, April 30, from 7:00am to 8:50am. **If you have ANY problem with the day or time the final exam is scheduled, you should drop the course and take it another semester. You will not be allowed to take the final at another time because of weddings or vacation plans. In the case of a last-minute medical emergency or a death in the family, you will be given an incomplete and required to take the common final the next time the class is offered.** The final will be held in the regular classroom unless you are told otherwise in the last week of classes.

Grades: Your grade will be calculated as 20% quizzes, 20% each midterm, and 40% final exam. The average grade profile for Stat 1040 is approximately 15% A's, 25% B's, 40% C's, and 20% D's and F's. However, there is considerable variation among sections, so the grade profile for this section may be higher or lower than the overall grade profile for the course. If every student does satisfactory work, every student will pass the class.

Tutoring Labs: Tutors will be available. They will answer questions and help explain difficult points in the text. More details will be provided later this week.

Reading and Exercises: Each week, you are expected to read 2 to 3 chapters from the book. This material will be discussed in the lectures. Homeworks will *not* be collected, but part of your reading responsibility is doing the exercise sets at the end of each section and at least some of the review questions at the end of each chapter. Your ability to do these is a measure of your understanding of what you have read. Solutions to the suggested review questions will be available on the web site before the quiz. A suggested reading program for each chapter is as follows:

1. Read the summary at the end of the chapter, taking careful notice of the key words which are in italic type.
2. Read the entire chapter without looking at the exercise sets, but paying attention to the key words. This much, at least, you should do before the lecture on a given chapter. The remaining steps you should try before the lecture, but may need to wait until after the lecture to complete.
3. Reread the chapter, this time doing the exercise sets. Whenever necessary, look back at the chapter to find the ideas that will help you to do the exercises. Check your answers against those in the back of the book when you have finished a problem. Do not get in the habit of looking at the answers before you attempt the problems!
4. Work the review problems suggested below. These will generally be more challenging than the exercise set problems. When you are done, check your answers against those posted on the course web site. If you are not yet comfortable with the material, you may want to look at some of the remaining problems as well.
5. Reread the summary to make sure you now understand the key words.

<i>Chapter</i>	<i>Suggested Review Problems</i>	<i>Chapter</i>	<i>Suggested Review Problems</i>
Part I	2 1,4,5,7,9,10,11,12	Part V	16 1,3,4,6,7,8,9,10
Part II	3 2,4,6,10	17	4,7,9,11
	4 1,3,6,7	18	2,4,6,9
	5 1,3,4,5,7,8,9	Part VI	19 5,6,9,12
	6 4,S6,S8,S10,S13	20	3,4,6,7
Part III	8 1,2,4,11	21	1,2,4,11
	9 2,8,11,12	22	3,7,8,12
	10 1,2,3,4	23	2,3,6,8,9,10,11,12
	11 1,2,3,4,5,6,7,12	Part VII	25 2,5
Part IV	12 2,3,5,8,9,10,11,12	Part VIII	26 1,2,3,5,6,8,10,12(a)
	13 2,3,6,7,8,9,11,12	27	1,3,7,8,10
	14 1,4,6,7,8,9,10,11	28	1,2,3,7
	15 S1,S3,S4,S5,S6,S9,S12	29	4,5,7,9

Courtesy: I expect you to be courteous to your fellow students and to me. Please turn off pagers and cellular phones before class, and please keep conversations to a minimum during lectures. I will not keep track if you come to class or not, or if you leave immediately after the quizzes on Fridays. However, I would highly recommend to attend all lectures. Also, leaving in the middle of a lecture is both rude and distracting; if you come and stay for the lecture, please stay until the end.

I reserve the right to lower your grade for repeated violations of this policy.

Disability Policy: If a student has a disability that will likely require some accomodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, preferably during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, 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.

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