INFORMATION SHEET FOR STATISTICS 1000  
Dr. Trumbo — Fall 2003

TEXT
David S. Moore: *The Basic Practice of Statistics*, 3rd edition, 2003, Freeman. ISBN 0-7167-9623-6. This is the required text. You need to have your own copy and to bring it with you regularly to class.

Notes: (1) Other sections of Stat 1000 are using different texts; make sure you buy the right one. (2) This is a widely used book, copies should be available on the internet. But if purchasing somewhere other than the Pioneer Bookstore: (a) Order well in advance to make sure you have your book by the first day of class. (b) Make sure you don’t order the 1st or 2nd edition, or a different book by Moore/McCabe of a similar title. Check all digits of the ISBN! (d) Make sure you understand the delivery charges and return policy.

An optional student study guide may be available at the Pioneer Bookstore or elsewhere. Buy it only if you think it will be helpful.

PREREQUISITE
ELM (Entry Level Mathematics) exam or equivalent. *Warning: This is a legally mandated prerequisite; if you slipped through the system without it, your registration may be canceled at any point. If you are exempt from the ELM requirement for some reason, you will need the equivalent math knowledge anyhow.*

AUDITS AND CREDIT/NO-CREDIT
No auditors will be accepted. Enrollment for CR/NC grading is discouraged. (If you insist and if this course is required for your major, get it in writing from a faculty advisor that a CR grade will count toward your major.)

TENTATIVE OFFICE HOURS
My office is SC N319. Phone: (510) 885-4133. Email: btrumbo@csuhayward.edu

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<thead>
<tr>
<th>Day</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Mon</td>
<td>3:30–4pm</td>
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<tr>
<td>Tues</td>
<td>9–9:35am, 5–5:35pm</td>
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<tr>
<td>Wed</td>
<td>5:50–6:20pm</td>
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<tr>
<td>Thurs</td>
<td>11:50am–12:15pm , 7:50–8:15pm</td>
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Notes: (1) Phone messages should be left with the Department Office. (2) If I am not in my office at the moment you arrive or call, please check with the Statistics Department Office [SC N229, (510) 885-3435] before giving up. (3) Email messages must show "STAT1000AM:" or "STAT1000PM:" at the start of the subject line (otherwise they will be deleted as spam).

OTHER ASSISTANCE
You are strongly encouraged to form small study groups for mutual self-help. You should exchange telephone numbers with some of your classmates so you can trade information in case of an occasional missed class, confer about homework problems, etc. As explained below, I do not grade "on the curve"; you are not competing with other students for grades.

A limited amount of tutoring may be available free of charge in the Learning Center; make sure to get a tutor who knows statistics (not a math major pretending to know statistics). Also, the Statistics Office maintains a list of private tutors who have told us they will tutor Stat. 1000 students for a fee to be arranged on an individual basis. (We try not to include unqualified tutors, but we cannot guarantee your satisfaction.)

TOPICS COVERED
For chapter and section numbers, refer to the Table of Contents of the text. (This outline is subject to change as announced in class.)

- **Week 1**: Chapters 1 and 2 (Descriptive statistics)
- **Week 2**: Chapters 3 and 4 (Normal distribution; Scatterplots and Correlation)
- **Week 3**: Chapters 5 (Regression)
- **Week 4**: Chapter 6 (Two-way tables) + Midterm
- **Week 5**: Chapters 7 and 8 (Producing data)
Week 6: Chapter 9 and 10 (Probability rules; Sampling distributions)
Week 7: Chapters 13 (Confidence intervals) + Midterm
Week 8: Chapters 14 and 15 (Testing hypotheses)
Week 9: Chapter 16 (Inference for the mean of a population)
Week 10: Chapter 17 (Two-sample tests)

Lectures will follow the topics of the text rather closely, but will usually use different examples. But the correspondence of topics between lectures and the text will not be perfect. As announced, some topics in the text may be omitted from the course, lectures may contain topics not covered in the text, and you will be responsible for covering a few topics in the text that are not discussed in lectures.

COURSE OBJECTIVES

- Introduction to a few basic descriptive statistical methods -- numerical and graphical.
- Introduction to the most basic probability rules and models.
- Based on the above, introduction to statistical inference (estimation and hypothesis testing) in a few situations commonly encountered in applications to psychology, sociology, and other sciences.
- Ability to use hand calculators and standard statistical computer software to perform computations necessary for the above.
- Ability to recognize situations that require statistical expertise beyond the scope of this course.
- Ability to read quantitative literature in your major field (and related areas) with an understanding of basic terminology and principles of statistics and probability.

EXAMINATIONS, QUIZZES, AND MINI-PROJECTS

There will be two midterm exams (approximately at the 4th and 7th week) and a final exam; each counts 100 points. The first midterm will be "closed book," but you will be permitted to use a "formula sheet" which you will prepare in advance. The second midterm and the Final (both cumulative in nature) will be "open book." **Bring your student ID with you to all exams.** Unannounced quizzes covering current material may be given in class from time to time. One or two mini-projects (30 points each) will be assigned, with specific due dates.

GRADING

Your grade will be mainly based on the average of the three exams (100 points each), mini-projects (30 points each), and quizzes (10 points each). **Subjective factors such as performance on collected homework, class attendance, quality of classroom participation, and maturity of approach on the final exam may also be taken into account in determining your course grade.** In particular, you may not receive grades A or A- if your score on the final exam is below 75.

I do not grade on the curve. The approximate average exam scores separating letter course grades are shown below:

\[
\begin{align*}
\text{A} & : 85 \\
\text{B} & : 75 \\
\text{C} & : 60 \\
\text{D} & : 50 \\
\text{F} & : 0
\end{align*}
\]

The Statistics Department follows very carefully the rules as stated in the Catalog for giving W (weeks 4-7) and IN grades (8th week on). In particular, you will not receive a W or IN grade if the only reason is poor academic performance. All incidents of academic dishonesty will be reported to the University administration, and will result in a lowered grade which is at my discretion.

MISSED EXAMS AND LATE WORK

You are expected to complete all work and take all exams according to announced schedules. Bring your currently valid University ID card with you to all exams. The general policy is that there are no make-up quizzes or exams, and that a 0 grade is given for missed exams and quizzes. If you must miss a midterm exam due to documented illness or emergency, I may (at my option) agree to replace the missing grade with a grade that I believe represents your relative performance in the class based on your other work, minus a 10 point penalty. Late homework will not be accepted.
CLASSROOM COURTESY

In recent quarters I have heard complaints that the behavior of some students is disturbing or distracting to others. Your consideration in such matters as the following is expected:

- **Cell phones and pagers must always be turned off during class.** Do it before you come in the door!
- You are expected to arrive on time when class starts, and to remain for the full class session. If you must occasionally arrive late or leave early, sit near an exit (probably not your regular seat) and try to disturb others as little as possible as you enter or leave. There will be a 10 minute break about halfway through each class session for visiting washrooms and vending machines.
- No food or drink (except water) is permitted in classrooms—not even water in computer labs.
- Conversations with other students—even if relevant to the subject matter—are distracting to others (especially to some with hearing difficulties); please save them for outside of class.

CALCULATORS

You must have a calculator for regular use during class and for exams. It must be able to carry eight digits of accuracy and to perform addition, subtraction, multiplication, division, and square root. It must also be able to do automatic computation of means and standard deviations. A calculator that will do automatic correlations, and regression lines will be useful for parts of the course. Calculators with all of these functions are generally available for less than $30. (In this course, a calculator without its instruction manual is no a calculator at all.)

ATTENDANCE AND KEEPING UP TO DATE

Regular on-time attendance and class participation are expected. Bring your copy of the text and your calculator to all class meetings. You will do better if you read the text material ahead of the lectures. Suggested homework assignments will be made at many class meetings. You should complete these before the next class meeting. Answers to some of the problems are found in the back of the text. Some homework problems will be collected and some will be discussed in class; you should discuss others with classmates or with me if you have any difficulty. Quiz and exam questions are often similar to homework problems.

The material in this class is highly cumulative. Topics covered earlier are essential to an understanding of what comes after. None of the material lends itself to last-minute memorization or "cramming" before exams. **It is very important to your success in this course that you attend class regularly and keep up to date with reading and homework assignments.** If personal circumstances will make it impossible for you to participate fully in this class, you need to take the course at another time.

COMPUTERS AND MINITAB

In order to introduce you to the use of micro-computers and the Minitab system, we will hold several class sessions throughout the quarter in the School of Science Computer Lab. Dates will be announced in advance. For use in computer-lab sessions, you will need two NEW micro-diskettes pre-formatted for DOS/Windows. Printouts of Minitab output and some instructions for using Minitab are shown throughout your text. A set of lab notes introducing Minitab is available on the Statistics Department web site: www.sci.csuhayward.edu/statistics in the path Courses > Course Materials > Minitab Demonstrations. The computers in the Lab are available for your use outside of class when the lab is open and the machines are not being used by another class. A currently valid student ID card is required in order to use the Lab. The use of Minitab to solve statistical problems will be tested on exams.

The Minitab software system is exceptionally easy to learn to use and is adequate for procedures learned in this course and for many other more advanced procedures. If you have access to a computer off campus and plan to continue to do statistical computations in your future education or research, you may want to consider buying Minitab. Talk to me before you do this.

Some business firms and research groups use Minitab, but more commonly they use more expensive and sophisticated statistical software packages, such as SAS and SPSS. These take longer to learn to use, perform more procedures, and are even more flexible for use with large data sets than the professional version of Minitab. A knowledge of Minitab will be a useful foundation for learning to use other statistical software.