Spring 2003

Statistics I (Eco 2100)

Syllabus

INSTRUCTOR: L.T. McRae  
OFFICE: Raley Hall 3106

HOURS: MW 9:00 – 10:00 a.m., 2:00 – 3:30 & 5:00 – 6:00 p.m.; T 1:00 – 4:00 p.m.

TEXT: Ronald M. Weiers, *Introduction to Business Statistics*

Goals and Objectives: In a business curriculum, the principal objective of the study of statistics is to equip students to understand the data and statistical techniques on which modern business decision making often rests. Students who have completed this course should be able to interpret descriptive statistics, should understand probability theory well enough to avoid doing some really stupid things, should recognize appropriate sampling techniques, and should be able to understand the results of simple inferential statistics such as confidence intervals and hypothesis testing. The introductory course also provides a necessary foundation for further study in many areas of business.

A secondary objective of the course is to help students understand the nature and pitfalls of the statistical studies on which government policy is sometimes based, so that as adults they can more effectively participate in American democracy.

This course carries a Numerical Data special designator in the Core Curriculum.

EXAMS: There will be three exams during the term on the dates indicated in the Outline and covering the material indicated there. There will also be a comprehensive Final Exam. All exams will be multiple choice.

TO REACH ME: Except for unusual circumstances, I keep my office hours. Students with questions may visit me during that time or send me an e-mail. During my office hours I will make a conscientious effort to answer all course-related communications. Announcements, homework assignments, etc. will be posted on my website, and students who miss class for whatever reason should check that site.

**e-mail me at:** MCRAELT@APPSTATE.EDU  
**my website URL:** http://www1.appstate.edu/~mcraelt/

COMPUTING: The arithmetic involved in this course requires only a relatively simple calculator. My recommendation would be one from the Casio fx series, the simpler the better. These are available at Walmart, K-Mart, Staples, etc.,
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for $10 – $15.

Many students already own a Texas Instruments graphing calculator. In my experience, few students can use these devices effectively, and their complexity interferes with learning the material of this course. If you must use your TI calculator, please note that I know little about these machines and, since their only real use is pedagogical, do not regard time spent learning to use them as a productive investment.

**HOMEWORK:** Students should work all the odd-numbered problems in the Weiers text; the answers to most of these are in the back of the book. Students who are having difficulty with particular blocks of material will find it helpful to work the even-numbered problems in that section as well. For even-numbered problems, I will of course provide answers on request and will, within reason, help students who come to my office and who have clearly made a serious effort already to work the problems.

For each class day, I will assign a few problems for students to work. Sometimes homework will be collected, and at other times a quiz will be given based on the homework problems. Collected homework and quizzes will count equally toward your grade. I consider working these few assigned problems and getting them all right to be the very minimum preparation needed by an excellent student. Students whose mathematical skills are less than excellent should obviously do more to prepare for exams. While working problems is not the only sort of studying you should do in this course, failure to work a number of problems as homework will almost guarantee failure in the course.

Assigned homework should be written up legibly, in good form, with all steps and work shown, and with the answers clearly identified. I will instruct my grader that if he cannot find the student’s answer, cannot read it, or cannot determine how the student arrived at the answer, he should simply mark that answer wrong.

**PLEASE NOTE:** Except for students who must be absent as “representatives of the university,” homework will be accepted only from students who are in class on the day it is due. Quizzes may not be made up under any circumstances; however, each student’s lowest two quiz/homework scores will be dropped before computing the student’s average.

**GRADING:** Each exam during the term will count 15% of your final grade; the Final Examination will count 35% of your final grade and homework/quizzes 20%. Thus your course average is given by the expression $CA = 0.45 \times \text{(Exam average)} + 0.35 \times \text{(Final Exam)} + 0.20 \times \text{(Quiz average)}$. Or, if you prefer to think of it that way, you have a total of 1000 possible points with each
hourly exam worth 150 points, the Final worth 350 points and homework/quizzes a total of 200 points or about 10 points apiece.

The scale for converting number to letter grades is:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Percentage</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A:</td>
<td>80 − 100 %</td>
<td>800 − 1000</td>
</tr>
<tr>
<td>B:</td>
<td>70 − 79.99</td>
<td>700 − 799</td>
</tr>
<tr>
<td>C:</td>
<td>60 − 69.99</td>
<td>600 − 699</td>
</tr>
<tr>
<td>D:</td>
<td>50 − 59.99</td>
<td>500 − 599</td>
</tr>
<tr>
<td>F:</td>
<td>under 50.00</td>
<td>under 500</td>
</tr>
</tbody>
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Please note that I very seldom give +/− grades.

**ABSENCES:**

Attendance is not required in this course; students have the freedom to decide whether or not to come to class. Like all freedoms, however, this one should not be abused. In my observation, students who routinely cut this class seldom do well and never do as well as they could have. Also, note that each homework assignment or quiz is worth about 1% of your grade; missing five classes will cost you half a letter grade, and indifferent or haphazard work on homework can easily cost you a letter grade. On the other hand, both homework and quizzes will be graded leniently, and devoting serious effort to these activities can easily increase your grade by a full letter.

Attendance at exams is a different matter. If a student misses an exam, the absence may or may not be excused. In the event of an excused absence, the weight of the two remaining exams will be increased so that each is worth 22.5% of the final grade; make-up exams will be administered only as noted below. In the event of an unexcused absence, the student will receive a zero for the exam missed. If a student has an excused absence from the Final Exam, a make-up exam will be scheduled at my convenience. Absences from exams will be excused only on account of the student’s illness, the serious illness or death of a near relative, or the student’s need to be elsewhere on business connected with the university or its classes and activities. Absences from exams will NOT be excused for car trouble, inclement weather, conflicts with the student’s job, etc. While I try to be sensitive to emotional distress, I reserve the right to require documentation of the reason for any absence the student desires to have excused.

Make-up exams will be given only in the most unusual circumstances and only by prior arrangement. In practice, make-up exams are almost entirely limited to students who miss an exam because they are out of town as a representative of the university. (Please note: field trips for other classes do not count under this provision.)
From time to time during the term, assignments and hand-outs may be distributed during a class period without previous announcement. Such materials or information will be given out only once; they will not be available in my office, by telephone, nor in subsequent class periods. Students who fail to receive an assignment or handout because of absence from class should get these materials from a classmate or download them from my website, and I grant blanket permission to copy or photocopy any such material.

**COURTESY:** Students who expect to be treated with courtesy in the classroom should themselves treat their instructor and classmates with courtesy. In recent years, there appears to be an increasing discordance about what constitutes courtesy. Therefore, note the following rules, based on my expectations, which pertain to my classroom and should pertain to any classroom:

- Do **not** simply get up and walk out of the classroom while the class is still going on. This is unbelievably rude behavior, and unless you mean to personally insult your instructor, you won't do such a thing. You may of course have to leave for a physical emergency, in which case you can apologize later. If you know before class that you must be elsewhere before the class ends, speak to the instructor before class and when you leave, do so as quietly and unobtrusively as possible.
- Do **not** talk with your neighbor while the instructor is lecturing or talking to another student. Such behavior is discourteous not only to the instructor but also to your classmates. A similar rule pertains for any other noisy or disruptive behavior.
- Do **not** eat in class.
- Do **not** bring the book for your next class and study for a test during my class. Most especially, do **not** read a newspaper during my class.
- Turn off all cell telephones, beepers, and alarms before class begins.
- In general, before you do it, think about how an action or remark is likely to be received, and remember that ignorance is no excuse for bad manners.

Finally, note that faculty members have the right to bar students from their classroom if they deem those students' behavior to be disruptive to the learning environment.
I. Populations and Distributions; Descriptive Statistics; Probability: Weiers, Chapter 1 (read for yourself); Chapter 2, Sections 2.1 and 2.2; Chapters 3 & 5
   • Exam: Friday, February 14
      • ML King Day is Monday, January 20.

II. Discrete and Continuous Probability Distributions; Sampling; Sampling Distributions: Weiers, Chapters 6 – 8, 4
   • Exam: Monday, March 24.
      • Spring Break is March 8 – 16.

   • Exam: Friday, April 25.
      • Easter Holidays are Monday and Tuesday, April 21 & 22.

IV. Arranging Data; Graphical Data Presentation: Weiers, Chapter 2 Sections 2.3 to 2.7. These topics will be covered on the Final Exam. The Final is a comprehensive examination, covering everything in the course.