Econ 3818--Intro to Econ Statistics  
Prof. Wesley Yordon  
Office: EB 107, phone 492-4464  
Hours MWF 1:30-2:30 or by appt.

SYLLABUS  
Spring 1993  
TA: Ned Martin  
Office: EB 306

Prerequisites: Six Business Math Modules 1050-1100, Econ 2010 & 2020 or equivalents.

Text: E. Mansfield, Statistics for Business & Economics. (This syllabus is for the 4th edition, but the 3rd is usable with adjustments in numbers.) You will also need access to the Mystat software--$5 versions for IBM or for MacIntosh are packaged with some copies of the basic text; IBM is recommended unless you have a strong preference for MacIntosh. Note also that there is a $16 version, Business Mystat (for IBM) sold separately (authored by Hale & Steagall, publ. by Course Technology) which has a much better user’s manual, and so is recommended for those who might want to use the program beyond this course.

Grading policy: weights for your term grade will be (a) 14% for each of the three quizzes, 40% for the final exam, 4% for each of the first two projects and 10% for the third, OR (student’s choice) (b) 4% for the worst quiz, 14% for the other two quizzes, 40% for the regular final, 10% for the replacement quiz (to be taken with the final exam), 4% for each of the first two projects and 10% for the third. The possibility of discounting (but not eliminating) the worst quiz to is designed to induce students to take all the quizzes without unduly penalizing those who miss (or do poorly) on one for legitimate reasons. If you miss the final exam because you are hospitalized or incarcerated (but not because you’re at a wedding) I’ll arrange a make-up if your prior work and attendance have been satisfactory. TO ALLOW FOR POSSIBLE ILLNESS IN HUMANS OR COMPUTERS YOU SHOULD PLAN TO TURN IN PROJECTS TWO DAYS BEFORE THE DUE DATE SPECIFIED SO PLEASE PLAN YOUR WORK ACCORDingly AND DO NOT ASK FOR FURTHER EXTENSIONS. (Warning--Univ. computers are congested during the last three weeks of the term.)

<table>
<thead>
<tr>
<th>Date</th>
<th>TOPICS AND ASSIGNMENTS</th>
</tr>
</thead>
</table>
| Jan 13-20  | Introduction: descriptive statistics  
Text pp. 1-75 (or pp. 3-72 in third edition)  
Exercises 1.1, 1.2, 1.6, 1.20, 2.1, 2.2, 2.8, 2.11-2.14, 2.19, 2.21, 2.23, 2.29, 2.31. (Exercises don’t count directly in your grade, but quizzes and exam will resemble them so you must do the exercises to succeed. If you are using the 3rd edition ask for cross index of the exercise numbers.) |
| Jan 22-Feb 1 | Probability: permutations & combinations  
Exercises 3.1-3.3, 3.5-3.8, 3.10-3.15, 3.18, 3.21, 3.32, 3.33, 3.36, 3.44, 3.46, 3.51 |
| WEDNESDAY, FEB 3 | QUIZ #1 ON CH. 1-3 & App. 3.1 |
| (If Boulder Valley Public Schools are closed due to snow, quiz will be Friday) |
| Feb 5-12   | Discrete random variables: expected values: binomial distribution  
Text pp. 122-168 (or pp. 117-159 in 3rd ed.)  
Exer. 4.3-4.4, 4.6-4.10, 4.13-4.17, 4.21, 5.4, 5.6, 5.7 |
| Feb 15-22  | Continuous random variables: normal and standard normal distributions  
Text pp. 182-205 (or pp.160-179 in 3rd ed.)  
Exercises 6.1 - 6.10, 6.13, 6.16. |
| WEDNESDAY, FEB 24 | QUIZ #2 ON CH. 4-6 (See snow policy above) |
Feb 26-Mar 3  Sample design: sampling distribution of mean & proportion; central limit theorem; finite population correction factor
  Text pp. 212-249 (or pp. 198-234 in 3rd edition)
  Exercises 7.1, 7.2, 7.5, 7.8, 7.15, 7.16, 7.21, 7.22-7.24, 7.31

FRIDAY, MAR 5--COMPUTER PROJECT #1 DUE BY 10AM (20% off for each day late)

Mar 5-10  Statistical estimation & confidence intervals for pop. mean and proportion: t-distribution
  Text pp. 259-82, 296-7 [#1-4] (or in 3rd ed. 243-66, 281-2)
  Exercises 8.1 - 8.2, 8.6 - 8.9, 8.12, 8.13, 8.16 d & e, 8.21, 8.22, 8.26a.

Mar 12-12  Testing hypotheses (intro)
  Text pp. 302-22 (or 3rd ed. pp. 287-307)
  Exercises 9.2-9.6

WEDNESDAY, MAR 17 -- QUIZ #3 ON CH. 7, 8, and 1st 20 pages of CH. 9
(If Boulder Valley Public Schools are closed due to snow, quiz will be Wed 3/31)

Mar 29-Apr 2  Testing hypotheses about population means & proportions

WEDNESDAY, APR 7--COMPUTER PROJECT #2 DUE BY 10AM (20% off for ea. day late)

Apr 5-9  Correlation and simple regression analysis
  Text Ch.12 & App. 12.1 (or Ch. 11 & App. 11.1 in 3rd ed.)
  Exercises 12.1, 12.12, 12.20, 12.22, 12.23, 12.28

Apr 12-16  Multiple regression analysis & a bit of ANOVA
  Text pp. 517-32, 420-21, 533-64 (or 3rd ed. 489-506, 400-1, 507-38)

Apr 19  Poisson and exponential distributions
  Exercises 5.12 - 5.21, 6.20, 6.21, 6.23

MONDAY, APR 26--PROJECT #3 DUE BY 10AM (12% off for each day late)

Apr 21-26  Confidence intervals and hypothesis testing for differences between two means or two proportions;
  determination of appropriate sample size
  Exercises 8.25, 8.27, 8.28, 8.36, 9.21, 9.25.

Apr 28-May 3  Review

MONDAY, MAY 10 AT 7:30 AM--FINAL EXAM (30 pts. M-C outcomes assessment questions over the entire course plus 70 pts. on material since quiz #3; 25 point replacement quiz for students who wish to discount their lowest quiz grade)