

ECON-S 370 STATISTICAL ANALYSIS BUS & ECON (3 CR)

Spring 2010 Section 16343 09:30AM-10:45AM BH 107

INSTRUCTOR: Prof. W. E. Becker PHONE: 855-3577 E-MAIL: beckerw@indiana.edu
OFFICE: 341 Wylie Hall OFFICE HOURS: 12:35-2:00 pm Mondays or by appointment

PREREQUISITES: M118, and at least concurrent registration in M119 and E201/E202.

REQUIRED TEXTBOOK: William E. Becker. *STATISTICS FOR BUSINESS AND ECONOMICS USING MICROSOFT EXCEL* (provided without charge by S.R.B. Publishing)

OTHER REQUIREMENTS: Some form of electronic computer file storage.

GENERAL EXPECTATION -- Students will be expected to: 1) recognize and define statistical concepts as used in economics and business, 2) apply those concepts to situations, cases and problems requiring a decision based on quantitative information, 3) describe and communicate inferences drawn from their knowledge of statistics, and 4) carry out data management and calculations in EXCEL.

The course requires daily computer lab work (BH107). There will be two midterm exams (Monday Feb 22 and Wednesday April 7) and a final exam (Wednesday May 5, 8:00-10:00am), which are administered in the computer lab. The final exam will be comprehensive. There will be NO make-ups for the final exam; in the event of an unpredictable catastrophic occurrence, which necessitates an excused absence, a grade of "Incomplete" will be given for the course. If and only if written approval has been obtained from Professor W. Becker prior to the administration of a midterm exam, the student will have his or her score from the relevant subsection of the final exam entered as a "make-up" score for excused midterm exam. There also will be homework that must be handed in on the designated due date, unless otherwise stated in class. There will be NO make-up for missed homework. Brief class participation exercises may be used in randomly selected class periods. Missing exams, homework and class participation exercises are given a score of zero.

Students are required to bring an Indiana University ID to all exams. As spelled out in the *Indiana University Code of Student Rights, Responsibilities, and Conduct* (<http://campuslife.indiana.edu/Code>) dishonest or disruptive behavior will not be tolerated and will result in immediate course failure and removal.

A student requiring any type of accommodation for a disability, religious belief, scheduling conflict, or other impairment that might affect his or her successful completion of this course must personally present the requested remedy or other adjustment in written form (signed by the student and dated) to Professor William Becker. Requests for accommodations must be received and authorized by Professor W. Becker in written form no less than 4 class periods in advance of need. No accommodation should be assumed unless so authorized.

WEIGHTS: midterm 1 19%, Midterm 2 22%, 6 assignments 24%; class participation 10%, and final 25%.

GRADES: Students can expect a grade distribution that yields about 25% As, 40% Bs, and 30% Cs. A weighted average above 89 ensures a grade in A range (i.e., A+, A and A-), above 78 ensures a B range grade, and above 55 ensures a C range grade.

EXTRA HELP: Examples using the EXCEL computer program, a demonstration final exam, and other details about the course are available at www.indiana.edu/~iustats.

COMPUTER PROGRAMS: Students use EXCEL and they are free to use any other program such as <http://www.wolframalpha.com/>, which can be used to spell out the steps to solve math and stats problems.

<u>Assignment</u>	<u>Due-Place</u>	<u>Topics</u>
No 1	1/22-WY105	Descriptive stats using EXCEL menus Ex 2.34, 2.35, 2.54, 2.71. (Hand in with EXCEL printouts.)
No 2	2/5-WY105	Use EXCEL (and hand calculations) to calculate expected values and st. dev. of a single random variable and sum of random variables. Ex 4.11, 4.12 (a and b, with EXCEL printout), 4.26 and 4.28 (parts a and b only, with EXCEL printout), 4.29, 4.31 (with EXCEL printout), and 4.47.
No 3	2/19-WY105	Binomial calculations with EXCEL and hand calculations of expected value and st. dev. for binomial random variable, with EXCEL printouts where appropriate. Ex 5.1, 5.9, 5.14 5.15, and 5.34. Calculate probabilities with normal Ex 6.1, 6.5, 6.6, 6.15, 6.17, 6.22, 6.23. (Where all probability work have EXCEL printouts)
Midterm One	2/22	Chapters 1 through 6
No 4	3/12-WY105	Calculate probabilities for sample mean, with σ known Interpret sampling distribution of mean Ex 7.15, 7.16, 7.17, 7.30, 7.32. (Where all probability work have EXCEL printouts.)
No 5	4/6-WY105	Confidence interval using t and z Ex 8.3, 8.5, 8.6, 8.13, 8.17, 8.18, 8.22, 8.26, 8.42. (Where all probability work and computer work have EXCEL printouts) Setting up and doing tests of hypotheses Ex 9.6, 9.7, 9.13, 9.15, 9.16, 9.19, 9.21, 9.23, (Where all probability work and calculations are done in EXCEL with EXCEL printouts
Midterm Two	4/7	Chapters 7 through 9
No 6	4/28-BH107	Simple Regression Analysis Ex 12.20, 13.9, 13.13, 13.23a, 13.36, 13.37, 13.38. (Calculations in EXCEL with EXCEL printouts) Multiple Regression Analysis Ex 14.2, 14.8, 14.11 (Calculations in EXCEL with EXCEL printouts)
Final Exam	May 5 (8-10am)	Comprehensive, with emphasis on Chapters 12-