Course Syllabus: (ECONOMIC METHODS)  
STATISTICAL METHODS FOR BUSINESS & ECONOMICS  
UVM EC 170 A/FALL 2013/L309 LAFAYE/MWF 4:05-4:55

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Required Text:* Statistical Techniques in Business & Economics (13th edition, not 14th or 15th editions), Lind, et. al.


* The 13th edition of the required text has been ordered by UVM's bookstore and should be available by the start of classes. New and used editions, meanwhile, are available through a number of online book vendors (very cheap!). To get you started, the first three chapters of the 14th edition (almost identical to 13th edition) are available at Blackboard (Bb). But don't buy the 14th edition. The 14th edition is nearly identical overall, but does have some errors and exercise changes that can present problems, and is much more expensive!

** The recommended text will be placed on reserve.

Course Objectives: Statistical analysis has a wide range of applications in today's world. The aim of this course is to provide a solid foundation for understanding why and how statistical analysis is used in the area of business and economics. The course begins with a look at essential statistical principles, then proceeds to concepts related to statistical probability and statistical inference, and finishes with the use of methods for one- and two-sample hypothesis testing. The course does not teach you Excel, but does offer some help with important tools available in the software.

Learning Methodology: Class lectures will follow the required text closely, Statistical Techniques in Business & Economics, (Lind, et. al.). This 13th edition provides all the essentials for an introduction to the important practical applications of statistical analysis, including probability, inference and hypothesis testing. Students are responsible for material found in the text and related lectures. The recommended text, The Complete Idiot's Guide to Statistics, 2nd edition, provides a second take on the same topics covered in the required text, and is highly recommended. As each chapter is introduced and presented in class, related exercises will be assigned (both in-class lab work and homework exercises). Exercise solutions will be provided by the instructor and reviewed in class. Any data required for exercises will be provided by the instructor if not available in the required text. All homework exercise assignments will be posted on Bb and will be completed online at Bb.

Homework Deadlines: All homework made available at Bb each week is due by Sunday at midnight See 'Grading Policy' below for additional details.
Course Outline: ***

I. What is the study of Statistics? (Chaps. 1 & 2)
   A. Types of statistics & variables
   B. Levels of measurement

II. Describing & Exploring Data: (Chaps. 3 & 4)
   A. Frequency distributions
   B. Numerical measures, displaying and exploring data

III. Surveying Probability Concepts: (Chap. 5)
   A. Assigning and computing probability
   B. Principles of counting

(Mid-term #1: Chapters 1–5); Date: TBA

IV. Probability Distributions: (Chaps. 6 & 7)
   A. Mean, variance and standard deviation
   B. Discrete and continuous probability distributions
   C. Normal, binomial, Poisson probability distributions
   D. The empirical rule

V. Sampling and Central Limit Theorem: (Chap. 8)
   A. Sampling methods and sampling distributions of the mean
   B. The Central Limit Theorem and sampling “error”

(Mid-term #2: Chapters 6-8); Date: TBA

VI. Estimation and Confidence Intervals: (Chap. 9)
   A. Mean point estimates and confidence intervals
   B. Population standard deviation

VII. Hypothesis Testing: (Chaps. 10 & 11)
   A. One-Sample tests/two sample tests
   B. Analysis of variance

VIII. Regressions and Correlation Analysis: (Chap. 13)
   A. Linear and multiple regressions
   B. Correlation analysis

*** The instructor reserves the right to alter the course outline and course requirements at any time.
Grading Policy:

Grades will be based on two mid-term exams (20% each), a non-cumulative final exam (40%), Blackboard (Bb) exercises, labs & quizzes (20%). Please note: All homework exercises need to be answered at Bb. All homework solutions notes and calculations must be kept in a notebook designated exclusively to this course and will be reviewed periodically and graded by the instructor. When doing the exercises at Bb, you may stop and save your work and return at a later time. Any late Bb exercise assignments will automatically receive a zero (one exception only). Each exercise is allowed two attempts, which are averaged for the calculated exercise grade. The lowest exercise grade will be dropped at the end of the semester. Weekly in-class graded labs using Bb will be given, which may include extra-credit questions. Please see the instructor if you have any questions.

Final Exam: Chaps. 9-11 & 13, Friday 12/6/2013, 1:30-4:15 PM L309

Attendance Expectations:

You are expected to attend every class and will be held responsible on exams and homework for any material presented or discussed in class. Exams will be based on readings/exercises and material presented in lectures. If you miss a class, it is your responsibility to acquire the material presented and assigned in that class. The professor may assign in-class quizzes without notice. Email Policy: The instructor cannot guarantee a timely response to e-mail inquiries/communication in terms of any course requirement deadlines (inside of 48 hours), although the instructor does try to respond to e-mail inquiries as quickly as possible via Smart phone.

Electronic Devices:

No electronic devices are permitted during class time unless pre-arranged with the professor, or when needed for lab work. Students who prefer to type notes must show the lecture notes to the instructor when asked periodically. UVM Code of Academic Integrity: Violations of the UVM's Code of Academic Integrity are any acts which would have the effect of unfairly promoting or enhancing one's academic standing within the entire community of learners. Such acts are serious offenses and will not be tolerated. Any suspected violations of the Code will be forwarded to the Center for Student Ethics & Standards. Go to http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf to read the Code of Academic Integrity.

UVM Diversity Statement:

The University of Vermont holds that diversity and academic excellence are inseparable. An excellent university, particularly one that is a public land grant, needs to actively seek to provide access to all students who can excel at the institution, without respect to their backgrounds and circumstances, including, among other differences, those of race, color, gender, gender identity or expression, sexual orientation, national and ethnic origin, socioeconomic status, cultural and/or geographic background, religious belief, age, and disability. There is, moreover, a compelling national interest in a higher education sector rich in diversity and opportunity, and a clear state interest in making the educational benefits of this diversity and opportunity accessible to all.