

E201: Introductory Statistics for Business and Management

Semester: Fall 2008

Section 001: Mondays, Tuesdays, Thursdays, and Fridays from 10:00 - 10:50pm.

- Instructor:** James Murray
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- Course Description:** This course gives learners the quantitative tools to be able to use data to answer interesting, real world, questions. Given this goal, the course involves some use of mathematical tools, computer tools, and a project that involves students finding an interesting, well motivated question, and answering it by collecting data and applying appropriate statistical techniques. Topics in course include descriptive statistics of center and spread, hypothesis testing about proportions, means, medians, difference in means and medians, inferences on correlation and independence, and principles of ordinary least squares linear regression analysis.
- Website:** All material handed out in class will be posted on the class website: <http://www.murraylax.org/m230/fall2008/>
Grades, announcements and other communication will be done through Blackboard.
- Office hours:** Regular office hours are 9:00am to 9:50am Monday through Friday, and 3:00pm to 4:00pm Mondays and Wednesdays. These are times when you can drop by unannounced and expect me to be in my office. I encourage you to not feel limited to these times and just send me an e-mail if you would like to meet at an alternative time. Keeping up with the material usually requires frequent office visits, so coming to my office for questions is essential to your success.
- Availability:** Outside of my regularly scheduled office hours, my availability changes all the time. You can visit my calendar at <http://www.murraylax.org/calendar.html>.
- Required Materials:** Textbook: Levine, et al. 2008. *Statistics for Managers Using Microsoft Excel*, 5th Edition. Pearson.
- Computing Resource: *Microsoft Excel*. Excel will be required for homework assignment, in-class exercises, and for students' projects.
- Calculator: I do *not* recommend you buy a fancy, expensive calculator. A simple calculator that can add, subtract, multiply, divide, and take a square root is all that is necessary.
- Quizzes:** There will be regular quizzes given throughout the semester, approximately one quiz per week (see last page for quiz schedule). Regularly attending class and keeping up with homework assignments should be sufficient preparation for successful performance on the quizzes. All quizzes are open book / open notes.

Project: There will be one project in which you will compute real statistics on real data to answer some real question that you hopefully find interesting. The project will consist of a short presentation of your research question, motivation for the question, description and defense of the data and statistical procedures used to answer the question, results from your statistical analysis, and inferences and conclusions. The presentation should be about 10 to 15 minutes, and you must be willing to let anyone interrupt for questions, comments, and/or criticisms at anytime during the presentation. You are encouraged to work in groups of two or three on the project.

Project Assessment: The project will be evaluated on the following criteria with the following weights:

Description of question and data(10%): Describe what question you are trying to answer. The question should be motivated: why is this an interesting or important question to answer? Very specifically describe what variables you are measuring and what your sample size is.

Description of statistics (30%): Describe and defend your choice of statistical methodology. Describe how the statistical results will lead to an answer to your big question.

Description/Interpretation of results (30%): Describe your statistical results. Interpret whether the results imply rejection of your null hypotheses or not. Describe using real world language what your results imply about the answer to your question.

Organization (20%): Presentation of question, statistical methodology, results, and conclusion flows naturally and clearly from one to another.

Professionalism and Style (10%): Should have professional looking presentation slides with all necessary information, and make the presentation in a professional manner. Should be open to questions at all times and respond in a professional manner with honest answers.

Exams: There will be 3 regular exams given throughout the semester. There will also be a cumulative take-home final exam due during final exam week.

Exam dates: The exam dates are the following:
Exam 1: Thursday, September 25nd, 2008.
Exam 2: Thursday, October 23th, 2008.
Exam 3: Thursday, November 20th, 2008.
Final Exam due: Tuesday, December 10th at 10am

Grade breakdown:	Quizzes:	20%
	Project/Presentation	15%
	Exam 1:	15%
	Exam 2:	15%
	Exam 3:	15%
	Final Exam	20%

Grade	93-100	A	69-76	C
Distribution:	89-92	AB	65-68	CD
	81-88	B	57-64	D
	77-80	BC	0-56	F

I reserve the right to scale everyone's grade up by the same amount on any graded item in the event that much of the class falls short of the scale above. However, even if the grades are significantly low, there is no guarantee that I will ever do this.

Attendance: I adhere to the official attendance policy of Viterbo University. Additionally, attendance is required to get any credit for quizzes and exams. If you need to miss a class day or exam day for a documentable, verifiable emergency (serious sickness, death in the family, etc) or for a University required extra-curricular activity, you can be excused if you notify me and provide verifiable documentation within two business days after the absence. If your documentation is successfully verified by someone with appropriate authority, you will be allowed to make up missed work.

Disabilities: If you desire classroom/testing accommodations for a disability, see Jane Eddy in Murphy Center 332, or call her at (608) 796-3194, to discuss your accommodation needs. The appropriate accommodations will be provided when her office contacts me about your needs, or your present to me the appropriate paperwork from her office. No accommodation should be assumed until authorized by your instructor.

Class Withdrawal: The last time to withdraw from the course with no grade assigned is Thursday, October 16, 2008. The last time to withdraw from the course for an automatic "W" is November 3, 2008.

Cheating: I follow the policy in the Academic Handbook with regard to cheating and academic dishonesty. In the event a student is caught cheating I will pursue the harshest penalty Viterbo University will allow and report the incident to the Academic Vice President, regardless of how small the offense may appear.

Class Conduct: I will not tolerate any disruptive behavior class. This includes, but is not limited to, using cell phones, having private conversations with your classmates around you while I am teaching, being logged into the computer when the topic does not require use of the computer, and using programs on the computer other than those being used for class topics (such as web browsers, instant messengers, e-mail clients, etc). If you fail to be respectful of these rule you will be asked to leave for the rest of the period and your absence will count as unexcused.

Incomplete: I adhere to the university policy in the Academic Handbook concerning issuing grades of incomplete. See the Handbook for more information.

Tentative Class Schedule:

It is possible we may cover the material below at a faster or slower pace than the schedule given below. Even if this is the case, the exam dates will not change.

Week	Topic (Reading)	Quiz/Exam
Week 1	Frequency Distributions (2.3) Measures of Center (3.1, 3.3)	
Week 2	Measures of Variation (3.2, 3.3) Correlation (3.5, 2.5)	
Week 3	Intro to Probability (4.1, 4.2)	Quiz on Variance Fri Sept 12
Week 4	Probability Distributions (5.1, 5.2) Normal Distribution (6.2, 6.3)	Quiz on Probability Fri Sept 17
Week 5	Sampling Distributions (7.3) Central Limit Theorem: Mean and Proportion (7.4, 7.5)	Exam on Thur Sept 25
Week 6	Hypothesis Testing: mean and proportion (9.1-9.5)	Quiz on Testing Fri Oct 3 Project: have question and dataset ready for approval.
Week 7	Confidence Intervals (8.1-8.4)	Quiz on Confidence Intervals on Fri Oct 9
Week 8	Inferences on differences in means, proportions (10.1-10.3)	
Week 9	Chi-Squared Test of Independence (12.3)	Exam 2 on Thur Oct 23
Week 10	Simple Linear Regression (13.2, 13.3)	Quiz on Chi-squared tests Fri Oct 31
Week 11	Assumptions behind regression. (13.4, 13.5)	Quiz on Regression Fri Nov 7
Week 12	Multiple Regression, Variance decomposition (14.1-14.3)	Quiz on Multiple regression Fri Nov 14 Project: Have statistical results completed.
Week 13	Multiple Regression Continued.	Exam 3 on Thur Nov 20
Week 14	Review, Catch-up	Quiz on multiple regression Fri Nov 27
Week 15	Project Presentations	Professional presentations of your projects.
	Take Home Final	Due Wednesday, December 10th, 10am.