Economics 3640 – Probability and Statistical Inference for Economists
Section - 001, Spring 2012, BUC 302, M, W, 3:00 PM - 4:20 PM
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Objective
It is an introductory course designed to introduce students to the theoretical foundations useful in statistical inference as well as the basic methods for handling data using a spreadsheet. Prerequisite for this class are College Algebra, (MATH 1090 preferred), ECON 2010 and 2020. At the end of the semester you should be able to
- Examine a dataset and summarize its features graphically and numerically using EXCEL
- Understand the foundations of probability theory and properties of various distributions
- Make inferences based on point and interval estimation and testing hypotheses

Evaluation will be based on
- Class participation   5%
- Assignments   45%
- Mid-term exam   25%
- Final exam   25%

Course grade criterion: $A \geq 95\%$, $95\% > A- \geq 90\%$, $90\% > B+ \geq 87\%$, $87\% > B \geq 83\%$, $83\% > B- \geq 80\%$, $80\% > C+ \geq 77\%$, $77\% > C \geq 73\%$, $73\% > C- \geq 70\%$, $70\% > D \geq 50\%$, $50\% > E$

Late assignments lose points. The exams must be taken at the scheduled time. When a student has a legitimate reason (documented emergency) for missing the midterm, the weight of the midterm will be added to the final. Absolutely no make-up exams are given. Incompletes are not generally given for non-medical reasons.

Suggested Textbook
David S. Moore, George P. McCabe, William M. Duckworth, Layth Alwan. *The Practice of Business Statistics*. 2nd Edition. Publisher: W H Freeman

Topics
1.   Examining distributions using graphs and summary statistics
2.   Examining relationships using scatterplots and correlations
3.   Probability theory and sampling distributions
4.   Point and interval estimation
5.   Hypothesis testing

Please refer to University of Utah Guidelines for legal issues.

Course Plan

Date	Day	Class	Topic	Chp
9-Jan	Mon	1	Displaying distributions with graphs	1
11-Jan	Wed	2	Displaying distributions with graphs	1
16-Jan	Mon		Martin Luther King Jr. Day holiday	
18-Jan	Wed	3	Describing distributions with numbers	1
23-Jan	Mon	4	Describing distributions with numbers	1
25-Jan	Wed	5	Examining relationships	2
30-Jan	Mon	6	Examining relationships	2
1-Feb	Wed	7	Producing data	3
6-Feb	Mon	8	Probability & Sampling Distribution	4
8-Feb	Wed	9	Probability & Sampling Distribution	4
13-Feb	Mon	10	Probability & Sampling Distribution	4
15-Feb	Wed	11	Probability & Sampling Distribution	4
20-Feb	Mon	12	Probability Theory	5
22-Feb	Wed	13	Probability Theory	5
27-Feb	Mon	14	Probability Theory	5
29-Feb	Wed	15	Probability Theory	5
5-Mar	Mon	16	Review	
7-Mar	Wed	17	**Midterm Exam**	
12-Mar	Mon		Spring Break	
14-Mar	Wed		Spring Break	
19-Mar	Mon	18	Introduction to inference	6
21-Mar	Wed	19	Introduction to inference	6
26-Mar	Mon	20	Introduction to inference	6
28-Mar	Wed	21	Introduction to inference	6
2-Apr	Mon	22	Inference for distributions	7
4-Apr	Wed	23	Inference for distributions	7
9-Apr	Mon	24	Inference for distributions	7
11-Apr	Wed	25	Inference for distributions	7
16-Apr	Mon	26	Inference for proportions	8
18-Apr	Wed	27	Inference for proportions	8
23-Apr	Mon	28	Inference for proportions	8
25-Apr	Wed	29	Review	
30-Apr	Mon		**Final Exam** (1:00 pm – 3:00 pm)	