BZAN 6320
Foundations of Business Analytics
Fall 2015 (6:00-9:00pm Monday)

Instructor: Dr. Archer McWhorter, Jr.
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Office Hours: 4:00-6:00 MTuW, or by appointment

TA/Grader: To be announced

Texts: *Statistics for Business and Economics* by McClave, Benson, and Sincich (12th Edition).

Prerequisite: Graduate standing

Homework: This course will average about one homework assignment per week. Several of the assignments will require use of Excel. Most of the assignments requiring computer work will be taken up and graded, but the non-computer assignments will *not* be. For assignments that must be handed in, late submission is permitted, but there will be a 10-point penalty per class meeting that the assignment is late. Complete solutions to homework assignments will be made available.

Exams: There will be a midterm exam covering the first half of the course and a final exam covering the second half. Tentative dates for these exams are given in the next section.

Grading: The weights and tentative dates of the homework assignments and exams are given below:

	Weight	Tentative Date
Computer Work	20	Various
Midterm Exam	40	October 12
Final Exam	40	December 11 (Friday, 5-8pm)

Makeup Exams: Makeup exams will be offered only under the most extenuating circumstances. If you are unable to make it to an exam, you must contact me or my secretary before the scheduled time for the exam or take a zero on that exam. A makeup exam may be harder than the scheduled exam.

Drop Policy: Wednesday, September 9, is officially the last day to drop a course without receiving a grade. Monday, October 30 is officially the last day to drop a course or withdraw.

Academic Honesty:

The University of Houston Academic Honesty Policy is strictly enforced by the C. T. Bauer College of Business. No violations of this policy will be tolerated in this course. A discussion of the policy is included in the University of Houston Student Handbook, and students are expected to be familiar with this policy (see http://www.uh.edu/dos/hdbk/acad/achonpol.html).

Accommodations for Students with Disabilities:

The C. T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, in order to receive academic accommodations, students must register with the Center for Students with Disabilities (CSD), telephone 713-743-5400, and present approved accommodation documentation to their instructors in a timely manner.

Course Calendar - BZAN 6320 (Fall 2015, 6:00-9:00pm Monday)

Week	Date	Lecture Material

1	Aug. 24	Basic tools for summarizing data
		   Graphics
		   Numerical summary measures
		Basic probability concepts

2	Aug. 31	Random variables and probability distributions Expected values Special probability distributions Binomial
3	Sep. 7	*Labor Day (no class)*

4	Sep. 14	More special distributions
		   Poisson
		   Normal
		Functions of random variables
		Random sampling

5	Sep. 21	Statistics and sampling distributions
		   Means
		   Proportions
		Basics of statistical inference
		   Point estimation
		   Interval estimation
		   t distribution

6	Sep. 28	More statistical inference
		   Hypothesis testing - basic concepts
		   Examples
		   p-values

7	Oct. 5	Two-sample problems
		   Independent samples
		   Paired differences
		Simulation modeling
		   Basic concepts
		   Native Excel vs Analysis Toolpak
		   Examples

8	Oct. 12	**Midterm Exam**

Week	Date	Lecture Material
9	Oct. 19	Begin simple linear regression
		Purpose and assumptions
		Estimation and hypothesis testing
		Quality of model fit
		Computer output
10	Oct. 26	Continue simple regression
		Interpretation
		Confidence and prediction intervals
		Introduction to multiple regression
		Assumptions
		Inference
		Interpretation
11	Nov. 2	Subset selection
		Methods
		Example
		Partial correlations
		Regression model-building
		Purpose, examples
		Variable transformations
		Dummy variables
12	Nov. 9	More model-building
		Regression diagnostics
		Analysis of count data
13	Nov. 16	Sensitivity analysis using data tables
		Introduction to Excel's Solver add-in
14	Nov. 23	Optimization problems
		Unconstrained
		Constrained
		Examples using Solver
15	Nov. 30	More optimization examples
		Forecasting models
		Moving average
		Exponential smoothing
		Trend and seasonal regression models
	Dec. 11	**Final Exam** (Friday, 5-8pm)