

BZAN 6320
Foundations of Business Analytics
Spring 2018 (6:00-9:00pm Wednesday)

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

TA/Grader: To be announced

Texts: *Statistics for Business and Economics* by McClave, Benson, and Sincich (12th Edition; note that the current edition is the 13th, but do *not* buy that 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 during the semester and a three-hour final exam. The final exam will cover only the material that follows the midterm exam. Tentative dates for these exams are given in the next section.

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

	<u>Weight</u>	<u>Tentative Date</u>
Computer Work	20	Various
Midterm Exam	40	February 28
Final Exam	40	TBD

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 (LaToya Brannon, 713-743-4723) 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, January 31, is officially the last day to drop a course without receiving a grade. Tuesday, April 3, 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 (Spring 2018, 6:00-9:00pm Wednesday)

<u>Week</u>	<u>Date</u>	<u>Lecture Material</u>
1	Jan. 17	Basic tools for summarizing data Graphics Numerical summary measures Basic probability concepts
2	Jan. 24	Random variables and probability distributions Expected values Special probability distributions Binomial
3	Jan. 31	More special distributions Poisson Normal Functions of random variables Random sampling
4	Feb. 7	Statistics and sampling distributions Means Proportions Basics of statistical inference Point estimation Interval estimation t distribution
5	Feb. 14	More statistical inference Hypothesis testing - basic concepts Examples p-values
6	Feb. 21	Two-sample problems Independent samples Paired differences Simulation modeling Basic concepts Native Excel vs Analysis Toolpak Examples
7	Feb. 28	Midterm Exam

<u>Week</u>	<u>Date</u>	<u>Lecture Material</u>
8	Mar. 7	Begin simple linear regression Purpose and assumptions Estimation and hypothesis testing Quality of model fit Computer output
9	Mar. 14	<i>Spring Break</i>
10	Mar. 21	Continue simple regression Interpretation Confidence and prediction intervals Introduction to multiple regression Assumptions Inference Interpretation
11	Mar. 28	Subset selection Methods Example Partial correlations Regression model-building Purpose, examples Variable transformations Dummy variables
12	Apr. 4	More model-building Regression diagnostics Analysis of count data
13	Apr. 11	Sensitivity analysis using data tables Introduction to Excel's Solver add-in
14	Apr. 18	Optimization problems Unconstrained Constrained Examples using Solver
15	Apr. 25	More optimization examples Forecasting models Moving average Exponential smoothing Trend and seasonal regression models
	TBD	Final Exam