Colorado State University (Pueblo), Hasan School of Business, Spring 2016
BUSAD 360 – Advanced Statistics
Section 1: MW 9:30-10:50, HSB 101
Section 2: MW 11:15-12:35, HSB 110
Section 3: MW 2:30-3:50, HSB 110

Instructor: Justin O. Holman, Ph.D.
Office hours: HSB 253, MW 12:30-2:30, 4:00-4:30
Course Page: http://www.justinholman.com/teaching/f16-busad360/
Email: justin.holman@csupueblo.edu

Overview: This class will explore advanced techniques in business statistics with a focus on applied regression analysis. Topics covered will include Scatter Plots, Correlation, Bivariate and Multiple Regression Analysis, Model Building, Curve-Fitting with Polynomials, Time Series Forecasting, Data Visualization, Statistical Computing and Monte Carlo Simulation.

Prerequisites: **MATH 121, BUSAD 265** or equivalent.

Textbook: *Business Statistics for Contemporary Decision Making*, 7th ed. by Ken Black.

Software: Google Sheets (XL Miner), Microsoft Excel (Analysis ToolPak), Python & R

Course Format: This will *not* be a traditional lecture class. Instead, we will use a "blended" approach. See https://en.wikipedia.org/wiki/Blended_learning or http://en.wikipedia.org/wiki/Flip_teaching.

Grading Components:

- **Midterm Exams** There will be 3 midterm exams. Each midterm exam will have 2 parts. Part 1 will be a take-home project and Part 2 will be a traditional in-class exam with problem solving, short essay and/or multiple choice questions.
- **Final Exam** The final exam will be a traditional in-class exam with problem solving, short essay and/or multiple choice questions.
- **Attendance and Participation** Students are expected to attend classes and participate in classroom activities.

Grading Criteria

Each grading component will be assigned a score expressed as a percentage. The weighted average of these percentages will determine your final grade. Standard grading thresholds will apply, i.e., >=90% will earn an A, >=80% a B, >=70% a C, >=60% a D, and <60% an F.

Classroom Etiquette

Professional behavior is expected at all times. Disruptive behavior in the classroom will not be tolerated. Anyone causing a disturbance will be asked to leave the classroom. Multiple infractions may result in referral to the Office of Student Judicial Affairs and/or being dropped from the class.

Special Accommodations

Some students may require special accommodation, for a variety of reasons, to achieve learning objectives. I will do my best to facilitate such requests. Please email or see me during office hours to make arrangements.

Court of Appeals

If a student is unable to attend class, misses an exam or fails to complete an assignment the score or grade assigned will be zero. Depending on circumstances, a makeup opportunity may be granted. Students may also request a review of an exam or assignment score. The Court of Appeals will only accept requests submitted via email to provide a communication trail and avoid misunderstandings.

Course Outline*:

Week	Topic
1	Scatter Plots and Correlation
2	Simple Regression
3	Residual Analysis
4	Time Series Forecasting
5	Regression Analysis Project and Midterm Exam 1
6	Multiple Regression Analysis
7	Regression Output Interpretation
8	Building Multiple Regression Models
9	Multiple Regression Project and Midterm Exam 2
10	Spring Break
11	Big Data Analytics
12	Statistical Computing
13	Monte Carlo Simulation
14	Monte Carlo Simulation Project and Midterm Exam 3
15	Finals Week - Comprehensive Final Exam

*** Subject to revision.**