Colorado State University (Pueblo), Hasan School of Business, Spring 2018
BUSAD 360 – Advanced Statistics
Section 1: MW 11:15-12:35 (HSB 117), Section 2: MW 1:00-2:20 (HSB 117)

Instructor: Justin O. Holman, Ph.D.
Office hours: HSB 253, MW 12:35-1:00, 2:20-4:00 TTh 12:35-1:00
Course Pages: http://www.justinholman.com/teaching/
Email: justin.holman@csupueblo.edu

Overview: This class will explore advanced techniques in business statistics with a focus on applied regression analysis and computational methods. Topics covered will include Scatter Plots, Correlation, Simple 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: *Introduction to the Practice of Statistics*, 6th ed. by D.S. Moore et al. [optional]
Courseware/Video: DataCamp.com, Against All Odds
Software: Google Sheets, XL Miner, Python, R

Grading Components:
  ● **Assignments:** Students will complete short projects and classroom activities (25%).
  ● **Term Project**: Students will complete a term project (25%).
  ● **Midterm Exams:** Students will take 2 midterm exams (25% each).

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 (subject to change)**:**

Week	Topic
1	Syllabus, Scatterplots and Regression
2	Multiple Regression
3	Model Building
4	Review and Exam 1
5	Intro to Python for Data Science
6	Intermediate Python for Data Science
7	Intro to Databases in Python
8	Data Visualization in Python
9	Data Science Toolbox for Python
10	Spring Break
11	Statistical Thinking in Python 1
12	Statistical Thinking in Python 2
13	Review and Exam 2
14	Intro to R
15	Final Exam

See other stuff I'm supposed to include in the syllabus template below.

APPENDIX B
SYLLABUS TEMPLATE
Department Name
Syllabus for COURSE NUMBER & TITLE
SECTION, DAYS, TIME, LOCATION, SEMESTER, YEAR, MODALITY

Instructor Name:
Instructor Office:
Phone: **E-mail:**
Department Office Phone: **Fax:**

Office Hours: Be specific, consider including "and by appointment"

Course Description: (Catalog language required at a minimum.)

Prerequisites: (If any)

Course Objectives/Instructional Methods: Course objectives are those things you expect students to know and be able to do as a consequence of taking the course. They are written in terms of demonstrable behaviors, e.g., Students will construct appropriate hypotheses in the field of natural sciences.

STUDENT LEARNING OUTCOMES (SLOs) must be included for Program, Gen Ed and/or GT Pathways as appropriate to the course designation(s).

General Education SLOs: General Education courses should include ties to the relevant CSU-Pueblo Gen Ed SLOs for that course; all Gen Ed SLOs are copied below.

- Use the English language to communicate with clarity, coherence and persuasiveness, demonstrating critical analysis, logic, precision and rhetorical awareness. (Communication)

- Identify, analyze and evaluate arguments and sources of information to make informed and logical judgments, to arrive at reasoned and meaningful arguments and positions, and to formulate and apply ideas to new contexts. (Critical Thinking)

- Articulate the nature of a multicultural society and recognize the role of aesthetic awareness, foreign language skills, cultural and social perspectives or human and institutional systems of the past and present. (Diversity and Social Responsibility)

- Clarify and evaluate their own values and ethical conduct and analyze the values and ethical conduct of others. (Personal Values and Ethics)

- Apply numeric, symbolic and geometric skills to formulate and solve quantitative problems. (Quantitative Reasoning)

- Apply the scientific method, laboratory techniques, mathematical principles and/or experimental design. (Scientific Reasoning)

- Identify and evaluate wellness principles, including mental, emotional and physical health, needed to make informed choices. (Wellness and Well-Being)

GT Pathways SLOs: General Education courses that have been approved for GT Pathways also must include language indicating that the course is part of the GT Pathways program, as well as the specific content and competency language required by the state. *See GT Pathways documents for this language.*

(e.g., GT-XY1 This course satisfies the Guaranteed Transfer (GT) Pathways Requirements for XY in ..... The Colorado Commission on Higher Education has approved [*prefix & number*] for inclusion in the Guaranteed Transfer (GT) Pathways program in the GT-XY1 category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html. This designation verifies the following Content Criteria and Competencies are met in this course. (*See GT Pathways document for specific required language.)*

Required Text(s) and Other Materials: (If any)

Course Requirements:

> *Suggested Reading and Viewing.*
>
> *Homework:* Provide policies including if/how homework will be graded and factored into the course grade, and deadline policies (how late homework will be handled).
>
> *Exams, Quizzes, and Projects***:** Provide policy on missed exams or quizzes, and consider notifying students of the scheduled final exam date/time.
>
> *Use of Technology***:** Explain what will be used/required/optional and how to access it.

Attendance/Participation: Policies are at discretion of the professor. If utilized, explain how your policies impact a student's course grade. Check departmental standards. If a student's attendance is not meeting your expectations and you have concerns about the student, consult with your department chair or associate dean.

Extra Credit: If offered, it must be fairly and universally offered, not just to selected students. Be specific on how it is factored into the grading.

Grading: Be very specific regarding the components of the grade and include "floors" for each of the letter grades (A range through F). One possible way to state a "floor" is as follows: an overall average

of xx percent will receive at least a grade of A-. (Grades and grading policy are specified in the university Catalog.)

Accommodations:
This University abides by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, which stipulates that no student shall be denied the benefits of an education "solely by reason of a handicap." If you have a documented disability that may impact your work in this class and for which you may require accommodations, please see the Disability Resource Coordinator as soon as possible to arrange accommodations. In order to receive accommodations, you must be registered with and provide documentation of your disability to: the Disability Resource and Support Center, which is located in the Library and Academic Resources Center, Suite 169.

Academic Dishonesty: *(Can use the suggested University policy language below, or an existing Instructor, Department or College Policy)*
Academic dishonesty is any form of cheating which results in students giving or receiving unauthorized assistance in an academic exercise or receiving credit for work which is not their own. In cases of academic dishonesty, the instructor will inform the chair of the department prior to implementation of punitive action. Academic dishonesty is grounds for disciplinary action by both the instructor and the Dean of Student Services and Enrollment Management. Any student judged to have engaged in academic dishonesty may receive a failing grade for the work in question, a failing grade for the course, or any other lesser penalty which the instructor finds appropriate. To dispute an accusation of academic dishonest, the student should first consult with the instructor. If the dispute remains unresolved, the student may then state his or her case to the department chair (or the dean if the department chair is the instructor of the course).

Academic dishonesty is a behavioral issue, not an issue of academic performance. As such, it is considered an act of misconduct and is also subject to the University disciplinary process as defined in the CSU-Pueblo Student Code of Conduct Policies and Procedures Manual. Whether or not punitive action has been implemented by the faculty, a report of the infraction should be submitted to the Dean of Student Services and Enrollment Management who may initiate additional disciplinary action. A student may appeal a grade through the Academic Appeals Board. The Dean of Student Services and Enrollment Management's decision may be appealed through the process outlined in the Student Code of Conduct Policies and Procedures Manual.

Early Alert: (Optional**)**
This course participates in the Early Alert program. Early in the semester, information about student performance in this class will be communicated to Student Academic Services. This information is then relayed to academic advisors and others involved in supporting student success. Your advisor may then
ask to meet with you to discuss your progress. The program is designed to promote success among our students through proactive advising, and through referral to appropriate resources. The effort continues throughout the semester, and instructor concerns can be posted to the Early Alert system at any time.

Important Dates: Could include a general schedule of topics covered in the course including deadlines on major assignments, could include drop/add dates, midterm and final exam dates.

Other Policies (optional): Cell phone/electronic devices policies, courteous behavior suggestions. Regarding cell phones, here is one possible wording: ELECTRONIC DEVICES: Please turn off and put out of sight all electronic devices during class time. The interruptions they cause disrupt class and interfere with the learning process. A repeat offender may lose credit for the day's work.

Learning Resources: *(Optional)*
Math Learning Center (location, hours, etc.)
Writing Center (location, hours, etc.)
General Education Tutoring Center (location, hours, disciplines, etc.)
Science Learning Center (location, hours, etc.)

Class Schedule (optional)