



DEPARTMENT OF STATISTICS

THE WHARTON SCHOOL
University of Pennsylvania

Statistics 102

Spring 2016

Introduction to Business Statistics

Sections 001 and 002

Syllabus

PEOPLE:

Instructor: Richard Waterman waterman@wharton.upenn.edu 443 JMH

Classes meet: Section 001, Mon/Wed 1:30pm-3:00pm. Room F85.

Section 002, Mon/Wed 3:00pm-4:30pm. Room F85.

Office hours: Mon 12-1pm. Tue 1:30 – 3:00pm.

Teaching Assistants:

tbd: tbd@wharton.upenn.edu

Questions about the homeworks should be addressed to the TAs. Administrative issues and exam related questions should be addressed to the Professor.

Course website: All course related materials will be distributed via the Canvas website and grades can be checked during the semester using Canvas. You can also use the discussion feature on Canvas to ask questions regarding the course material, exams and any scheduling issues.

COURSE OVERVIEW

This course takes the foundational ideas introduced in Stat 101 (probability distributions and statistical inference) and extends them into the realm of statistical modeling. In particular, the goal of the course is to develop competency in multiple regression modeling. This form of modeling is ubiquitous in business settings and provides the basis for activities that involve predictive analytics. Predictive analytics can be used for wide ranging tasks such as predicting how much you will like a movie, predicting your lifetime value as a customer to your insurance company or predicting the price of a stock at the end of next year.

We will be using JMP software to implement the regression models. If you master both the JMP software and regression modeling you will have developed a well-defined and in demand skillset by the end of the semester.

The structure of the course will be to review the key ideas from Stat 101, move on to the Simple Regression Model (SRM), then learn about the Multiple Regression Model (MRM) and then as time permits to cover some time-series analysis and logistic regression.

Readings from the text book will be posted on the Canvas site.

COURSE MATERIALS

TEXTBOOK: Statistics for Business, Stine & Foster, Second Edition.

Datasets from the book can be accessed at:

http://media.pearsoncmg.com/aw/aw_stine_statforbus_1/cw/stb1e_student_launch.html

SOFTWARE: JMP 12, available for purchase from <http://upenn.onthehub.com> or available on public Wharton computers.

HOMEWORK

There will be 5 homework assignments during the semester. They will not be accepted late except for a valid reason (for example, a health or family emergency). Upload a PDF version of your homework answers to the Canvas site. Your answers must contain a cover page with your name (as it appears on Canvas) and your section. Please include your name on a header on each page.

You may work with and help one another with the homework. You must however submit your own solutions, with your own write-up and in your own words. Verbatim copying from someone else's file is a severe violation of the honor code and will incur severe penalties.

Graded homeworks will be returned as annotated PDF files on Canvas.

Scores for homeworks will be finalized one week after they have been returned. If you have a query regarding your grade you must submit it to the TA in writing via email. You should reference the solution key and articulate why you think it is wrong and you are right or why you think you should have gained additional points. There is a one week window to query grades. It is the case, that on

review by the TA, if they consider that the grading has been too lenient or simply in error, points can be deducted as well as gained.

Late submissions will be penalized 25% for being one day late and 50% for being two days late. After 2 days from the due date solutions will be posted, so no more submissions will be accepted at that point. The lowest assignment score will be dropped.

QUIZZES

There will be four in-class quizzes. Quizzes last ten minutes and have 4 multiple choice questions. They will start at the beginning of the class period. There will be no make-ups for missed quizzes for any reason. The lowest quiz score will be dropped.

EXAMS

There will be one in-class midterm exam and a final exam. They will both be multiple-choice. You can bring a one-page 8.5 x 11 crib sheet (front and back) to the exam. A basic scientific calculator will be helpful. No networked devices may be used during the exam – for example, you cannot use the calculator on your iPhone.

GRADING

The final grade will be weighted using 15% from the four quizzes (drop the lowest), 20% from the 5 homeworks (drop the lowest), 25% from the midterm and 40% from the final exam.

CLASSROOM EXPECTATIONS

There is no formal participation component to the final grade but questions are strongly encouraged. Phones, laptops and other electronic devices (except tablets for note-taking) are not to be used in class.