THE GEORGE WASHINGTON UNIVERSITY
Department of Statistics

STAT 2118: Regression Analysis, Spring 2015

SYLLABUS

Instructor: Dr. Joshua Landon, Rome Hall, Room 652.
E-mail: jlandon@gwu.edu    Phone: 202-994-7581
Office hours: 3:00-4:00 p.m. Tuesdays, and by appointment

TA: Joshuah Touyz (joshuah@jouyz@gwu.edu), Jesse Jeter (jessejeter@gwu.edu)
Your TA will lead the recitation section.

Lecture: M & W 12:45-2:00 p.m., 1957 E St. NW, Room B12.
Lab: register for one recitation section.

Textbooks:  Regression Analysis by Example, 5th Edition, Chatterjee and Hadi

Course Description: The aim of the course is to introduce basic concepts of simple and multiple
linear regression, inference, partial correlation, residual analysis, stepwise model building,
 multicollinearity and diagnostic methods, indicator variables, and their applications.

Prerequisites: One course in statistics: Stat 51, Stat 53 or equivalent.

Learning Outcomes: As a result of completing this course, students should be able to:

1. Understand basic concepts of correlation, regression, model diagnostics and model building.
2. Know how to fit and interpret regression models and apply them in various fields (e.g.
   Finance, Economics).
3. Analyze and interpret Regression data using R.
4. Compare different competing regression models and select the best one among them.

Homework: Homework will be assigned almost every week. Your TA will go over problems
similar to the HW problems and R examples during lab sessions.

SAS Projects: There will be at least two computer projects involving the use of R to statistically
analyze data. A report along with the R code and R output has to be turned in.

Exams: There will be two midterm examinations and one final examination in this course. They
will be closed book but a sheet with formulas will be allowed.

Grading: Your final grade will be determined by a weighted average of assignments and exam
scores: Homework 10%, SAS Projects 20%, Midterms 40%, Final 30%.