Statistics E102 – Spring 2016

Lecture Schedule

Number Date Topics

1 1/26 Descriptive Statistics

2 2/2 Introduction to Probability

3 2/9 Discrete Distributions, Permutations and Combinations, Binomial distribution

4 2/16 Continuous Distributions, Normal Distribution, Normal Approximation to the

 Binomial Distribution

5 2/23 Populations and Samples, Standard error of the Mean, t Distribution

 Confidence Limits for the Mean of a Normal Distribution

6 3/1 Estimation for the Binomial Distribution

 3/8 Midterm Exam

 3/15 Spring Break

7 3/22 Hypothesis Testing- General Concepts, Type I, Type II Error, One sample t test

 Relationship Between Hypothesis Testing and Confidence Intervals

8 3/29 Power and Sample Size Estimation, One Sample Binomial Test

9 4/5 Paired t test, Two-sample t test for independent samples with Equal Variances,

 F test for the equality of 2 variances

10 4/12 Two-sample t test for independent samples with Unequal Variances,

 Study Design, Two-sample test for Binomial Proportions

11 4/19 2 x 2 Contingency Tables, Chi-Square Distribution,

Chi-Square test for 2 x 2 Tables, Analysis of r x c Contingency Tables

12 4/26 Linear Regression Model, Method of Least Squares,

 F test for simple linear regression, t test for simple linear regression

13 5/3 R2, Correlation coefficient, Statistical inference for correlation coefficients,

 Multiple Regression

 5/10 Final Exam