STT 301 Syllabus: Fall, 2015

BASICS

Instructor: Vince Melfi, C421 Wells Hall, 432-3384, melfi@stt.msu.edu

Course Meetings: MW 12:40pm-2:00pm, B110G Wells Hall

Website: http://www.stt.msu.edu/Academics/ClassPages/ Some data for the course is available at http://www.stt.msu.edu/~melfi/STT301/data/.

Office Hours: MW 10:10am-11:30am, C421 Wells Hall and by appointment. Scheduled office hours will not be held on September 2, October 7, November 4, and December 2.

Course Text: Course notes will be distributed electronically.

Course Content and Instructional Objectives: The STT 301 course description reads “Obtaining and managing data using statistical software. Data visualization and graphics. Special challenges in working with high-dimensional data.” More specifically, the course will introduce students to the R language and environment for statistical computing and graphics, and will focus on the following topics:

1. Introduction to data and to R
2. R Markdown
3. Working with data
4. Graphics
5. More advanced data manipulation
6. Functions and Programming
7. Simulation
8. Classification
9. Working with text data

If time permits, the course also will introduce students to methods for scraping data from the web.

HOW TO LEARN

This is not a course where students will learn from passively reading the text and listening to lectures. Students will take a more active role than is typical in many courses. Outside of class students will read the text while at a computer, entering R code while reading. In addition, students will ask themselves questions about what they are reading and will answer these questions using R. A portion of the class meetings will be devoted to lecture and quizzes, but the main focus of class meetings will be on students using R.

Both (actively) reading the text outside of class meetings and actively engaging with R during class meetings will be important for student success.

GRADED WORK

Homework: There will be several homework assignments during the semester. Students will work in groups on these assignments, and will turn in one assignment for the whole group. The low homework grade will be dropped before the course grade is computed. Homework grades will comprise 30% of the course grade.
Quizzes: Many class meetings will begin with a quiz focused on the readings done outside of class. The three low quiz grades will be dropped before the course grade is computed. Quiz grades will comprise 25% of the course grade.

Exam: There will be a written exam given during the final examination period. This exam will comprise 25% of the course grade.

Project: Students will, in groups, complete one project which will be due near the end of the semester. More details on project topics and format will be given later in the semester. The project will be graded both on a presentation and on a written report. The overall project grade will comprise 20% of the course grade.

**GRADING**

A course percentage will be computed based on the percentages given above for each of the categories. For example, suppose a student’s percentages in each category are:

Homework: 82%
Quizzes: 78%
Exam: 77%
Project: 90%

The student’s course percentage would then be

\[(0.30)(82) + (0.25)(78) + (0.25)(77) + (0.20)(90) = 81.35\]

A course percentage of “P” will result in a course grade as follows:

\[
\begin{align*}
4.0: & \quad 90 \leq P \leq 100 \\
3.5: & \quad 85 \leq P < 90 \\
3.0: & \quad 80 \leq P < 85 \\
2.5: & \quad 75 \leq P < 80 \\
2.0: & \quad 70 \leq P < 75 \\
1.5: & \quad 65 \leq P < 70 \\
1.0: & \quad 60 \leq P < 65 \\
0.0: & \quad 0 \leq P < 60
\end{align*}
\]

The example student, with a course average of 81.35, would receive a grade of 3.0.

**IMPORTANT DATES**

- September 2, 2015: First Day of Classes
- September 7, 2015: Labor Day – Official Holiday/University Closed
- September 9, 2015: Online open add period ends at 8 p.m.
- September 28, 2015: End of tuition refund period for fall semester courses – no refund after this date
- October 21, 2015: Middle of Semester; 8 p.m. – deadline to drop full-semester courses for the fall semester with no grade reported
- November 26 & 27: Thanksgiving Holiday
- December 11, 2015: Classes end for fall semester
- December 17, 2015: Final Examination (12:45pm-2:45pm)

**NOTE:** As the semester progresses it may be necessary to make changes to this syllabus.