STAT 350 Lab Syllabus (Fall 2015)

Most weeks of the semester, we will have computer labs on Wednesdays starting with the first week of the semester. The assignments will be posted no later than the Monday before the lab. Please see the schedule and computer lab web page for details. When we have lab, the lab report (see below for details) will be due on the following Thursday at midnight on Blackboard. If there are both individual and group parts of the lab, the individual part is due on Thursday and the group part is due on Friday. We will not accept hard copy lab reports. All group members must have the same professor, though they may be in different sections.

In each weekly lab assignment, there are one or more problems, each of which consist of several parts.

In addition to the weekly labs, there will be one group computer project. The description of the projects will be posted later. The due date is listed both on the schedule and the computer lab web page. Again, all group members must have the same instructor.

Software:

You have a choice of one of two software packages: SAS or R.

SAS has been the industry standard program for actuarial scientists in the past. Though this is gradually changing, a number of companies still use this software. In addition, SAS is the software package used in STAT 512 which is required for all statistics majors, actuarial science majors and statistics minors. It is strongly recommended that if you are planning to take STAT 512 that you choose SAS. Most academicians use R because of its flexibility and because it is an open source program (and free). I expect all other majors to use R.

There will be tutorials for both packages on the computer lab web page; one for each lab. These tutorials will help you to learn how to use the software packages to solve problems in lab assignments. It is suggested, though not required, that you run the relevant examples in the tutorial and then complete the lab problems. In addition, there are video tutorials available on LaunchPad for R. To access them, go to: Resources → Content by type → Student Resources → Video Technology Manuals → scroll down until your get to the R Video section and then click on the video that you are interested in.

Reports

Lab reports should consist of the code or procedure used, all relevant output from your software package and the answer to all of the questions. Relevant output is anything that is explicitly asked for or is necessary to answer the questions. If too much information is provided, then points will be deducted. For SAS users, be sure that you do not include ALL of the output. For R users, do not copy the whole console screen. However, you do need to include more than just the answers to the commands because labels are often not included so we will not be sure what the numbers represent.

All lab reports should include the following:

- Your name, the instructor's name and time of your class (or section number) on the first page. If this is a group report, then the information for each of the students in the group needs to be included even if all of the students are in the same section.
- All lab reports should be well organized. The lab report should be in the following format:
  - For SAS users, the code needs to be at the beginning of each question. R users may either provide the script at the beginning of the question or an appropriately edited copy from the console.
  - The answers should be in the order given with each answer clearly labeled.
  - The relevant output should be included in the text before it is referenced. If appendices are used for the output, points will be deducted. If you include more output than is necessary to answer the questions, then points will be deducted.
  - If the answers are included in the output, then they need to be highlighted. This can be accomplished using the Snipping Tool (see below). You many also choose to retype the answer below the output. In R, often the output just lists numbers, in that case, you have to either retype the answer or change the code in R so that R will print the output clearer.
  - All discussion questions need to be answered in complete sentences.
- All lab reports will be submitted on Blackboard in a single pdf file. Reports not in pdf format will receive no more than half credit. If you make more than one submission, we will grade the last one.

Hints

- Have two windows open when you are doing your lab: 1) the software package and 2) Word (or another word processing program). As you run the your software, copy/paste or use the Snipping Tool to transfer it from the software package to Word. For a brief tutorial on the Snipping Tool, go to https://www.youtube.com/watch?v=YR_cq21c0T4. Even though this is for an older version of Windows, the information is still valid. What I do is just copy/paste the snip into the word document (which is what I did to get the graphic above).

- Once you have finished the assignment, use Word to save the file as a pdf and submit that to Blackboard.

- If you have any questions, ask your instructor or TA, post to Piazza or come to office hours and we will be glad to help you.
- All of the files for both the tutorials and the assignments will be available on the Lab webpage.
- If you do not receive credit for a group assignment, please contact your instructor as soon as possible. Be sure to include the names of all of your group mates so we can track down the problem.
- Please see Piazza for hints on the software packages and how to create pdf files.

Grade

The weekly lab assignments are 12% of your total grade. The project is 3% of your total grade. The lowest lab report (not counting Lab 1) will be dropped.

We do not accept late work. Submissions must be made to Blackboard using pdf format.