

MATH 3070-003: APPLIED STATISTICS I R LAB

Fall 2019

Instructor: Curtis Miller	Time: H 9:10 – 10:30 AM
Email: cmiller@math.utah.edu	Place: LCB 115

Course Pages:

1. <http://www.math.utah.edu/~cmiller/classes/FA193070>

Office Hours: H 12:00 – 3:00 PM, or by appointment, JWB 121 in my cubicle

Required Materials:

- John Verzani, *Using R for Introductory Statistics, Second Edition*, CRC Press, 2014.
- You will need to download the [R statistical software package](#). I also highly recommend you download the R IDE [RStudio](#); this is very helpful when coding in R.

Objectives: This course is an introduction to using the R statistical software package for statistical computing.

Tentative Course Outline: In this course, we will cover chapters 1 through 9 of Verzani's book. This includes using R for:

- Creating and analyzing datasets
- Simulating random variables
- Creating statistical graphics
- Performing inferential statistics

Grading Policy: Grading is based exclusively on fourteen equally weighted lab projects. The lowest three lab project grades will be dropped (it will count neither for nor against you), but the last three projects must be completed in order to be candidates for being dropped (this serves as an incentive to complete all assignments). Do not expect a curve to be applied. Be aware that your score in the lab will be reported to your lecture instructor, and that your lab grade may be used for the computation of the final grade you receive for MATH 3070 (you receive only one grade for both the lab and the course). **You cannot pass MATH 3070 without passing both the lab section and the lecture section of the course.**

Important Dates:

Last Lab Thursday, December 8, 2016

Projects: Projects are assigned in class Thursday of every week and will be due the following Thursday at the beginning of class. **I do not accept late assignments; any assignment turned in after the deadline will be given a 0 grade.**

I will require you to use R Markdown to write your projects and submit your projects online as `.rmd` or `.rnw` files. There are a few reasons why I want you to use R Markdown:

1. It makes grading your projects easier, since input, output, and commentary are all included in one well-formatted, human-readable document.
2. The emphasis on a human-readable document will encourage you to explain your code and methods while you write the code (this is called literate programming).
3. Many users of R in the real world use R Markdown for communicating methodology and results.

If I cannot compile your document, I will not try to fix it; I will consider it your fault and give you a poor grade on that lab assignment. Thus I strongly recommend that you try to compile your projects yourself before submitting the `.rmd` or `.rnw` file.

If you would like useful resources for R Markdown (cheat sheets, references, etc.), visit <http://rmarkdown.rstudio.com/>. (Notice that R Markdown is much easier to use if you are using RStudio.)

Cheating: Anyone caught cheating will be given a failing grade in the course and reported to the proper University of Utah authorities for further penalization. There will be zero tolerance for cheating. Cheating includes (but is not limited to):

- Plagiarism (duplication of someone else's work without giving proper credit)
- Verbatim duplication of someone else's project (you are permitted to work together, but producing an exact duplicate of someone else's project is unacceptable; note that facilitating duplication, such as giving your project to a student so he can copy your work, also counts as cheating even though you yourself are not using it to boost your grade)
- Not completing your work yourself (such as having someone else complete your projects for you)

Class Conduct: During normal class, I want all electronic devices silenced, though I will allow such devices to be used. Technology is an essential part of modern statistics so you may use technology in class so long as you are participating in the class. You are encouraged to bring a calculator; you will need it. I want you to participate in class, but please do not engage in side conversations; I find them distracting. Snacks or soft drinks are not permitted (we are in a lab, and I do not want to risk damaging the computers). You are expected to be polite and conduct yourself in a professional manner. You should show me and your fellow students respect. Disruptive behavior (including violation of any of my requests mentioned above) will not be tolerated and may result in expulsion from the classroom.

ADA Statement: The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations.

Safety Statement: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit <https://safety.utah.edu>.

Other Policies: All University of Utah policies are in force, including the student code and dress standards. If you are an athlete, provide me all the proper documentation for any accommodations you need as soon as possible. Students needing accommodation for University of Utah sanctioned events (such as athletics) need to give me the appropriate documentation at the beginning of the semester. If I do not receive this documentation, I am not obligated to accommodate you.

I reserve the right to make changes to this syllabus for any reason at any time. I will notify you via e-mail or Canvas when those changes are made. You are responsible for reading my messages.

Useful Resources: If you need assistance, I recommend you first go to the University of Utah Math Center (underground connecting JWB and LCB buildings) and the Tutoring Center located there. Sometimes they have statistics tutors there (check their tutor schedule) and they can provide free tutoring when available. There is a computer lab in the Math Center where tutoring takes place if you need access to a computer. You may also request a tutor from ASUU's tutoring services by visiting their office in SSB. There are online resources such as Khan Academy you may use as well. (I have compiled useful links at <http://math.utah.edu/~cmiller/other.html>.) If you need to see me, visit me during my office hours or e-mail me and schedule an appointment.