

MATH 3070: APPLIED STATISTICS I R LAB

Fall 2021

Instructor: Julie Sherman	Time: Th 7:30-8:50 AM -Or- Th 9:10 – 10:30 AM
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Course Pages:

Canvas

Materials:

- John Verzani, Using R for Introductory Statistics, Second Edition, CRC Press, 2014 (optional).
- 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 thirteen 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). Final grades will be assigned according to the following:

Pass +73%

Fail0–72%

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.

Projects: Projects are assigned Thursday of every week and will be due the following Wednesday at Midnight MST on Gradescope. **Your file must be submitted as a pdf.** 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 a pdf. 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 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) [SEP]
- 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) [SEP]
- 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. 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. If you need to see me, visit me during my office hours or e-mail me and schedule an appointment.

Covid: University leadership urges all faculty, students, and staff to model the vaccination, testing, and masking behaviors we want to see in our campus community. These include:

Vaccination:

- Get a COVID-19 vaccination if you have not already done so. Vaccination is proving highly effective in preventing severe COVID-19 symptoms, hospitalization and death from coronavirus. Vaccination is the single best way to stop this COVID resurgence in its tracks.

Visit <http://mychart.med.utah.edu/>, <http://alert.utah.edu/covid/vaccine>, or <http://vaccines.gov/> to schedule your vaccination.

Masking:

- While masks are no longer required outside of Health Sciences facilities, UTA buses and campus shuttles, CDC guidelines now call for everyone to wear face masks indoors.

Testing:

- If you are not yet vaccinated, get weekly asymptomatic coronavirus tests. This is a helpful way to protect yourself and those around you because asymptomatic individuals can unknowingly spread the coronavirus to others. Saliva based testing is available at alert.utah.edu/covid/testing

Self-Reporting:

- All of us, including faculty, students, and staff, must self-report if we test positive for COVID-19 via this website: <https://coronavirus.utah.edu/>.

The following five items are standard syllabus items not directly related to Covid.

Note, however, that some of the services described may be available only on a modified or limited basis due to the Covid pandemic. Check online or call the relevant unit for up to date information.

Misc.

- The Americans with Disabilities Act: 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 & Access, 162 Olpin Union Building, 801-581-5020, <https://disability.utah.edu/>. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

- Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, office for equal opportunity and affirmative action including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, <https://oeo.utah.edu/contact-us/index.php> or to the Office of the Dean of Students, 270 Union Building, 801-581-7066, <https://deanofstudents.utah.edu/>. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to police, contact the Department of Public Safety, 801-585-2677(COPS), <https://police.utah.edu/>.

- Campus Safety: 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 safeu.utah.edu

- University Counseling Center: The UCC staff is committed to supporting the mental health needs of our campus community. Their phone number is 801-581-6826. Their hours are Monday-Friday, 8:00am-5:00pm. For after-hours emergencies, contact the 24/7 Crisis Line: 801-587-3000. More information is at <https://counselingcenter.utah.edu/> .

- Office of the Dean of Students: The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. To contact the Office of the Dean of Students, please email deanofstudents@utah.edu or call 801-581-7066. There is more information at <https://deanofstudents.utah.edu/> .