

Math 3070 / 3170 - Applied Statistics (R Lab) Fall 2015

Instructors: Hanlei Zhu & James Farre

Class Hours:

(002. Instructor: Hanlei Zhu) H 07:30-08:50
(003. Instructor: Hanlei Zhu) H 09:10-10:30
(005. Instructor: James Farre) H 17:30-19:00
(006. Instructor: James Farre) H 15:40-17:00
(007. Instructor: James Farre) H 15:40-17:00

Location: LCB 115

Office:

Hanlei Zhu: LCB loft
James Farre: JWB 306

Email: hzhu@math.utah.edu; farre@math.utah.edu

Office Hours: By appointment

Website: On Canvas; sign in through CIS or go to <https://utah.instructure.com/>

Text (optional): Using R for Introductory Statistics, John Verzani (ISBN: 1-58488-450-9)

Prerequisites: “C” or better in MATH 1220 OR MATH 1250 OR MATH 1270 OR AP Calculus BC score of at least 4.

Switching Lab Sections:

As noted above (see: “Class Hours”), there are different sections for this lab with different meeting times. Students may request to move to a different section at a different time. We want everyone to attend a lab time that is convenient for them. However, because there are a limited number of seats in the computer lab, you must email or talk to your instructor after lab and get permission to switch to a different section.

Course Objectives:

This is introductory-level statistical laboratory course taught in R language. After completing this course, students should be able to do the following given a practical problem using R.

- Display and summarize low-dimensional datasets, both graphically and numerically.
- Solve simple probability problems such as two dice problems.
- Perform basic formal statistical analysis and interpret the results.
- Calculate and interpret confidence intervals.
- Conduct hypothesis testing, calculate and interpret P-values.
- Suggest appropriate experimental designs for practical problems.

Course Content:

The lab portion of MATH 3070 consists of attending and completing at least 10 of 13 labs. Each lab will have an accompanying assignment with a few statistical problems. Assignments are available in advance if students want more time to prepare for a lab. If you would like an assignment in advance please email your instructor. Arrive at the lab on time and well-prepared. *You must physically attend the lab to get credit for the worksheets, and you **CANNOT** miss the last 3 labs.*

Grading:

Every week there will be a lab assignment covering the material that we have done. Each assignment consists of 2-3 statistical problems, and will be graded out of 10 points. You must submit a report with your R codes, relevant charts/tables, and the statistical inference results. You will be given time to work on your assignment and ask questions about it in the lab. You can turn it in at the end of the lab if you are able to finish it. Otherwise you can submit the assignment on Canvas before the midnight on Sunday of that week. In general, ***no make-up assignments will be given, but the 3 lowest scores will be dropped at the end of the semester.*** The remaining 10 scores will be added resulting in a total score for the course, out of 100. A total score of 70 or lower will result automatically in failing the entire 3070 Applied Statistics I course. ***You must pass the lab in order to pass the course.***

Students must pass each lab during its regularly scheduled time. If a student experiences hardships in the lab and is having difficulty completing problems on time they are advised to prepare ahead of time by emailing their instructor first and arranging to meet sometime for one-on-one tutoring. Also, it is expected that on occasion students will miss a lab, or a few labs, due to situations beyond their control. This is why three assignment scores are allowed to be dropped. ***If more than three labs are missed, due to a documented emergency, the instructor will decide how the grading will proceed on a case by case basis.***

ADA:

The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic learning, and psychiatric disabilities. Please contact me at the beginning of the semester to discuss any such accommodations that you may require for this course.

Services and Facilities:

The Math Center is located underground between JWB and LCB. In the math center you'll find free tutoring, computer access, group study rooms, and an individual study area. The regular hours for the Fall semester are: 8:00am - 8:00pm on Monday through Thursday and 8:00am - 6:00pm on Friday. The tutoring center will open on the second week of the semester.