

IFSC 4399/5399, Spring 2020

Intro to R Programming

Instructor: Mary Yang, Ph.D.

Lecture meets: MW 9:35 am - 10:50 am (EIT 218)

Office hours: MW 12 pm-1 pm (EIT 303)

Email: mqyang@ualr.edu

Course Overview

Prerequisite: basic computer programming skills. This course is designed to provide a comprehensive introduction to R. The R language offers a rich environment for working with data. Students will learn how to use the programming language and statistical environment R to perform scientific computing and data visualization. This is a hand-on, project-based course to enable students to develop skills for solving data science problems using R.

Learning Objectives

By the end of this course, students will have gained skills in each of the following areas.

- Ability to process, manipulate and analyze various type of data
- Ability to creating advanced visualizations
- Ability to write scripts to automate data analysis and visualization

Textbooks

R for Data Science by Hadley Wickham, Garrett Grolemund

The Art of R Programming by Norman Matloff

Machine Learning with R by Brett Lantz

R Graphics Cookbook by Winton Chang

Grading

Homework (15%), Lab (15%), Exams (40%), Project (30%)

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = below 60%

Late Policy

Late assignments will be marked down 5% daily including the day after the due time.

Attendance and Study Expectations

Attendance is critical in mastering the course material. If you must miss class, please send an email to the instructor before class begins explaining the reason for your absence. Participation implies making comments, observations, contributions, and asking questions in the classroom. On the 10th day of classes, students who have not attended in class will be administratively withdrawn by the instructor. Students may be administratively withdrawn from a class by the instructor for excessive absences during the semester. Also in college it is expected that you are spending two hours studying, reading, and working on assignments for every hour spent in class (so if you have a 3 credit class (about 2.5 hours of class time) you should plan on 5 hours a week of learning outside of the classroom).

UA Little Rock Plagiarism/Academic Policies

Plagiarism on any assignment will at a minimum result in 0 points for the assignment. We reserve the right to pursue further disciplinary action if appropriate (e.g. any student caught cheating on an assignment/assessment will receive an "F" for the course, and we may pursue action with the Committee on Academic Integrity). Plagiarism includes copying someone else's work and claiming it as your own, or collaborating excessively with another person or persons and claiming

the work as solely your own. It is strongly recommended that students maintain a record of the preparation of their major assignments. For more information on academic offenses, please refer to the following websites:

- Academic Integrity and Grievance Policy - <https://ualr.edu/deanofstudents/section-vii-administration/academic-integrity-grievance-policy/>
- Academic Offenses: <https://ualr.edu/deanofstudents/section-vii-administration/academic-offenses/>

Inclement Weather Policy

During inclement weather, UA Little Rock will make a decision whether or not to close based on all available information. The chancellor will decide whether or not conditions warrant canceling classes and activities and closing the campus or whether classes and activities will be canceled but with specified campus offices open. Online or web-enhanced classes will continue as scheduled at the discretion of the faculty member. The UA Little Rock website, UA Little Rock email, the university's main telephone number (501.569.3000), and the Rave campus alert notification system are the official means of communicating information concerning weather-related closings. When necessary, the university will announce a separate decision about canceling night classes (those classes starting at 4:20 p.m. or later) by 2 p.m., if possible. For further information, Please review the Inclement Weather Policy available at <https://ualr.edu/policy/home/admin/weather/>

UA Little Rock Disability Policy

Your success in this class is important to me, and it is the policy and practice of the UA Little Rock to create inclusive learning environments consistent with federal and state law. If you have a documented disability (or need to have a disability documented), and need an accommodation, please contact me privately as soon as possible, so that we can discuss with the Disability Resource Center (DRC) how to meet your specific needs and the requirements of the course. The DRC offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an interactive process among you, your instructor(s) and the DRC. Thus, if you have a disability, please contact me and/or the DRC, at 501-569- 3143 (V/TTY) or 501-683- 7629 (VP). For more information, please visit the DRC website at ualr.edu/disability.