STA 3100 (Class Number: 21848)

Programming With Data in R

Fall 2023

MWF 11:45 a.m.-12:35 p.m. (Room: FLO 0100)

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Instructor: Juhyung Lee

Office:	Griffin-Floyd 103B
Office Hours:	TBA
Email:	juhyunglee@ufl.edu

Teaching Assistant: TBA

Office:	TBA
Office Hours:	TBA
Email:	TBA

Course Description: An introduction to statistical computing and programming with data. Topics include basic programming in R; data types and data structures in R; importing and cleaning data; specifying statistical models in R; statistical graphics; statistical simulation using pseudo-random numbers; reproducible research and the documentation of statistical analyses.

- Install R and RStudio (IDE for R) on your PC.

Course Objectives:

1. Import data into R and prepare the data for analysis.
2. Write functions in R making effective use of data structures and control structures.
3. Determine statistical graphics appropriate to a statistical analysis and produce them using R.
4. Formulate statistical models in the R language.
5. Perform and document a basic statistical analysis.
6. Carry out basic simulations.
7. Document and report the results of data analyses and simulations in a reproducible way.

Prerequisites: STA 2023 ($\geq$B) or STA 3032 ($\geq$B-) or AP statistics ($\geq$4).

Course Website: e-Learning. Check course website at least once a day for updates.

Course Material: Lecture notes and R scripts (will be posted on course website), in-class notes (will not be posted).

Useful References:

- R
  1. *An Introduction to R* by Venables, Smith, and the R Core Team.
  2. *R for Data Science* by Wickham and Grolemund.
- Introductory Statistics
  1. *Statistics: The Art and Science of Learning from Data* (3rd ed.) by Agresti and Franklin.
  2. *Probability & Statistics for Engineers & Scientists* (9th ed.) by Walpole, Myers, Myers, and Ye.

Course Communication: Office hours and email.

- Use GatorMail for email; otherwise, you may not hear back from me. I do not check Canvas inbox.
- Put 3100 in the subject line of your email; otherwise, you may not hear back from me. I teach multiple courses and use course numbers to search emails from students.
- Allow me 24 hours to reply to your email.
- Email is not ideal for content questions. Ask them in person (e.g., in class, office hours, etc.).

Assignments and Grading:

- Grades will be based on the following components.

Homework						Final Exam	Attendance	Total
1	2	3	4	5	6	(take-home)		
10%	10%	10%	10%	15%	15%	20%	10%	100%

- Attendance will be checked after the drop/add period and evaluated as follows.

# Absences	≤ 2	3	4	5	6	7	8	9	10	11	≥ 12
Points (%)	10	9	8	7	6	5	4	3	2	1	0

- The following cutoffs will be applied strictly for letter grades. For example, a final score of 69.99 will be a D and cannot be rounded up to a C.

		A	≥ 95	A-	90 to < 95
B+	87 to < 90	B	82 to < 87	B-	80 to < 82
C+	77 to < 80	C	70 to < 77		
		D	60 to < 70		
		E	< 60		

Course Policies:

- You will be marked absent if you are more than 15 minutes late.
- Since there is no in-class or timed exam, each homework assignment serves as a small test and will be graded strictly for accuracy.
- **A late assignment will be accepted with a penalty of 25% credit per day.** For example, suppose Homework 1 is due on mm/dd/yyyy at 11:59 p.m. and you submit Homework 1 on mm/**dd+1**/yyyy at 12:01 a.m. Then you will receive at most 75% for Homework 1. You will be given sufficient time for each assignment and no excuse for being late will be accepted. **Note that a due date is the last day you can submit your assignment, not the day you should submit your assignment.** It is fine if you decide to submit your assignment at a later time on or before the due date, but that means you are taking more risks and it is your responsibility if you fail to meet the deadline. For example, it is your responsibility if you could not submit your assignment due to an outage (e.g., power, Internet, Canvas, etc.) in the due date evening.
- Once graded and announced, your homework/exam can be reviewed by the grader only if a request is made within one week.

Academic Integrity:
You may discuss homework with each other, but you must write up your solutions independently. You may never discuss exams with each other. You are held accountable to the UF Student Honor and Conduct Code.

Students with Disabilities:
Students requesting accommodation for disabilities must first register with the Disability Resource Center (DRC). The DRC will provide documentation to the students who must then provide this documentation to the instructor when requesting information. You must submit this documentation prior to submitting any assignments for which you are requesting accommodation.

Course Evaluations:
Students are expected to provide feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.