STA6166 - 13F8sd   **Statistical Methods in Research I**   **Spring 2025**

Instructor: Bikram Karmakar (`bkarmakar@ufl.edu`).

Class hours: Tuesdays, Period 4 (10:40 AM - 11:30 AM) and
Thursdays, Period 3 - 4 (9:35 AM - 11:30 PM).

Classroom location: Anderson Hall (AND) room 134 on Tueaday and Turlington Hall (TUR) L005 on Thursday.

Course website: Canvas page. Please check regularly.

Instructor's office: 226 Griffin-Floyd Hall (FLO). (Phone. 352-273-2994)

   Instructor Office Hours: Fridays 3:00 pm–5:00 pm, or by appointment.

Objectives:

Training graduate students in the sciences to plan and conduct experiments and data analysis.

Prerequisite: STA 2023 or equivalent. If you have questions regarding this, consult with the instructor.

Class schedule

Typically classroom lectures will be in-person. The lectures on Feb 18, 20, 25 and 27 may be virtual. In case lectures are virtually, you will be informed ahead of time.

Course materials

Textbook: *An Introduction to Statistical Methods and Data Analysis*, 7th Edition by R. Lyman Ott and Michael T. Longnecker.

Lecture notes: Lecture notes/overheads will be posted on Canvas after each lecture. They are not meant to be substitutes for the lectures. You are responsible for learning all the material presented during the lecture, and *any topic covered in a lecture is a potential exam topic* (unless otherwise stated). The lecture notes may not reproduce everything covered in the lectures. On occasions, there may be additional information in the lecture notes.

Computing: We will use the free statistical computing language R. You should download it from `https://www.r-project.org` and install it before Tuesday September 6. You may wish to also download Rstudio from https:// www.rstudio.com (go to `https://www.rstudio.com/products/rstudio/` download to get the free Open Source License).

You can ask for assistance in installing R from our TA. R code will be provided for all methods covered in the course either in the lecture notes or separately on Canvas.

Additional materials, e.g., R programs and data sets, may be posted on Canvas and you will be notified of them using Canvas announcements. In addition, Canvas announcements will be regularly used to provide updates regarding the class. Please make sure you get alerts on all Canvas announcements.

Course structure

Take-home exercises: Exercises will be posted regularly on Canvas. They will not be graded. Thus, you are not expected to hand in your answers to the exercises. But, you should solve or attempt to solve all of them to learn the material thoroughly and *be best prepared for the exams*. You may work with other students to solve the suggested problems and study the course material. Although, you will be assessed individually. We will post solutions to all the exercises on Canvas. Naturally, you will learn best if you attempt to solve the exercises before consulting the solutions.

Homework assignments: There will be 4 or 5 assignments. You will have at least one week to hand them in from the time they are posted on Canvas. Some of the assignments will require you to use R.

Exams: Four within-term exams are tentatively scheduled on:

Tuesday, Feb 4– Exam 1

Tuesday, Feb 25 – Exam 2

Thursday, Mar 20 – Exam 3

Tuesday, April 23 – Exam 4

The lowest of the first 3 within-term exams will be dropped. This may be an exam that you did not attend.

Attendance: Classroom lecture attendance and participation are fully expected. You are responsible for learning all material presented during lectures, and any topic covered in the lectures is a potential exam topic (unless otherwise stated).

Grading: Grading will be based on a composite score: 5% class participation + 25% homework assignments + 45% from within-term exams 1–3 (equal weighting) + 25% within-term exam 4. There may be opportunities for earning extra credits.

Final letter grades will be assigned based on the University's grading scale that includes minus-grades (this may change depending on any changes in policies). You can familiarize yourself with the University's grading policy here: `https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx`.

Tentatively, we will follow the following percent to letter grading scale: $A = 95$–100 or above, $A- = 90$–94, $B+ = 85$–89, $B = 80$–84, $B- = 75$–79, $C+ = 70$–74, $C = 60$–69, $C- = 50$–59, and so on. The lower limits on this grading scale may be lowered. Your final composite score calculation will be done outside of Canvas using the details provided above. *Please note that the formula used by Canvas will not necessarily produce the final average according to the course grading scheme.*

Course Policies

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, `dso.ufl.edu/drc`) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: `catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/`

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Relevant links: `gatorevals.aa.ufl.edu/students/`; `ufl.bluera.com/ufl/`; `gatorevals.aa.ufl.edu/public-results/`.

`https://policy.ufl.edu/policy/masking-and-physical-distancing/`

Campus Resources:

Counseling and Wellness Center: `http://www.counseling.ufl.edu/cwc/`.

Academic Resources: `http://www.ufl.edu/academics/resources/`.

Disability Resource Center: `https://www.dso.ufl.edu/drc/`.

Student Health Care Center: `http://shcc.ufl.edu`.

U Matter, We Care: If you or someone you know is in distress, please contact `umatter@ufl.edu`, 352-392-1575, or visit `umatter@ufl.edu`.