

STA 4502
STA 5507

Introduction to Nonparametric methods
Applied Nonparametric Methods

Fall 2021

Course Information

Time: Tue 10:40 a.m. – 11:30 a.m. (Period 4), Thu 10:40 a.m. – 12:30 p.m. (Period 4-5),
Location: Griffin Floyd 100

Instructor: Dr. Sayar Karmakar

Office: Zoom (Links shared in the first announcement) **E-mail:** sayarkarmakar@ufl.edu

Office Hours: (might change occasionally) Tue 8-9 pm office 101B (might change to zoom and can move to afternoon) Thu 12.45-1.45 pm.

Teaching Assistant: Steven Goodman

Office: TBD

E-mail: s.goodman@ufl.edu

Office Hours: TBD

Prerequisite

STA 4210 and STA 4321

Course Contents

A study of basic concepts in distribution-free statistics with applications. Topics include one-sample and two-sample interval estimation and hypothesis testing for proportions and medians, analysis of variance, association, and linear and multiple regression.

Course goals

After successful completion of the course, students will be able to draw inferences about the following populations and their parameters:

- one proportion and two proportions (dependent and independent samples)
- one median and two medians (dependent and independent samples)
- distribution symmetry
- two variances
- distribution functions
- three or more medians (independent and dependent samples)
- bivariate association and correlation
- regression slope, intercept, and output (simple linear and multiple)

Text

Book name: Nonparametric Statistical Methods 3rd Edition

Author(s): Hollander, Wolfe, Chicken

ISBN: 978-0470387375

Coverage: 1.1-1.2, 2.1-2.3, 3.1-3.9, 4.1-4.4, 5.1-5.5, 6.1, 6.5, 6.9, 7.1, 7.3, 7.5, 7.9, 7.10, 8.1-8.5, 9.1-9.6, and 10.1-10.3 from the textbook

Course Website

Canvas course page. Please check the canvas site regularly. Most course documents and important information, including homework exercises and solutions, sample exams and special announcements, will be posted in canvas.

Mode of teaching

At present, thanks to the increasing numbers of COVID-19 cases in Florida, how this class will pan out.

- The classes except for the very first (24 Aug) and the very last (23 Nov) are fully in-person. This might change, more likely during the first two weeks.
- The quizzes are taken during classroom time but this might change if a portion of students have to go back to online.
- Similarly, exams are also taken in-person during classtime but this might change if a portion of students have to go back to online. If any student has to take the class online, we will allow flexibility for all students to choose how they want to give the exam. Regardless where you take the exam, at the end of the exam, there will be extra time to scan and upload it to the speedgrader system,
- At this point, it is mandatory to have one office hour for the TA and the instructor to be held in-person but it is highly recommended that the students coming in wears a mask to make the instructor and the helping TA more comfortable. We will do a poll in the beginning of the class to see if we can move both office hours to zoom.
- Class policy flexibility: Some of these policies might need to change depending on how the class behaves or performs. Students should feel free to directly email the instructor to discuss concerns.
- Canvas announcements: In general, the number of announcements will be considerably more than an in-person class. These will generally talk about when certain lecture notes/exams become available or about some class policy. The zoom links for the class and office hours (both instructor and TA) are going to be the same throughout. This will be sent in the morning of the first class. Please keep checking the canvas announcement page regularly.

Exams, Quizzes and Grades

- The course is divided into three parts. At end of each part there is a non-cumulative exams that covers syllabus primarily from that part only. The * includes the Thursday classes which are typically two periods. The ** refers to the quiz days which are usually kept on Thursdays. This will be done in the second period of those days.
 1. Part 1: Intro: Aug 24 (online) Aug 26* Aug 31 Sep 2** Sep 7 Sep 9* Sep 14 Sep 16**
Sep 21 (Exam 1)
 2. Part 2: Aug 23* Aug 28 Aug 30** Oct 5 Oct 7* Oct 12 Oct 14** **Oct 19 (Exam 2)**
 3. Part 3: Oct 21* Oct 26 Oct 28** Nov 2 Nov 4* Nov 9 Nov 16 Nov 18** Nov 23 (online)
Thanksgiving break for reading **Dec 2 (Exam 3)**
- You will be permitted to bring one 8.5 by 11 inches sheet of paper with formulas or notes written on both sides to each exam.
- Make-up exams will be offered and you must either let the instructor know well before the scheduled day of the exam which you need to be excused from (for a non-emergency reason), or produce a proof of emergency (or medical problem) as soon after the missed exam as possible. We will try to restrict make-up exams to at most one per student.
- **Calculator:** A non-graphing calculator might be used for the exams and quizzes however you will not be penalized for not simplifying terms like $\binom{20}{4}/\binom{30}{6}$
- Letter grade allocation

B+	84 to < 88	A	91 to 100	A-	88 to < 91
C+	74 to < 77	B	80 to < 84	B-	77 to < 80
D+	64 to < 67	C	70 to < 74	C-	67 to < 70
E	< 55	D	60 to < 64	D-	55 to < 60

Note that, the scores shown in canvas does not account for conditional weightage of exams.

- There are six in-class quizzes out of which two worst will be dropped. These 4 will account for 25% of the final grade.
- There are 3 in-class exams with 30%, 30% and 15% weight towards final grade. The choice of the exam that will have 15% weight is automatic as we will choose the worst of the three exam performance for downweighing
- You are encouraged to discuss homework problems with other students; however, you must answer on your own during the quizzes. Solutions to the homework exercises will be posted after the quizzes.
- The instructor and Teaching Assistant make every effort to ensure that grades assigned are scrupulously fair and reflect the quality of the work concerned. Due to this process of consultation and the use of uniform grading criteria, the TA has complete authority in all actions that he undertakes regarding the quizzes, and the instructor is unlikely to rescind any of his decisions.

Suggested Additional Exercises

In order to master the course material it is essential that you work as many exercises as possible. For this reason, along with the weekly homework exercises, additional suggested exercises from the textbook will also be posted on the course web-page on a regular basis. You are not expected to submit answers to these suggested exercises, but you should solve all of them to keep up with the pace of the course and thoroughly learn the material. This will also help you prepare for the exams.

Lecture Attendance

Classroom lecture attendance is fully expected, even if not strictly enforced. You are responsible for learning all material presented during lecture, and any topic covered is a potential exam topic (unless otherwise stated).

Reasonable Accommodations

To request classroom accommodation, please be certain that you have made all necessary arrangements with the Dean of Students Office, and obtain from them documentation to submit to the instructor at the time of your request. A request must be made to the instructor at least one week in advance of the date for which the accommodation is requested. This course information and policies sheet can be made available in alternative formats to accommodate print-related disabilities. Contact the instructor for more information.

Academic Integrity

Please familiarize yourself with the Student Honor Code and Academic Honesty Guidelines outlined in your University of Florida Student Guide at <http://www.dso.ufl.edu/sccr/honorcode.php>.