

Syllabus

STA 4321 & STA 5325, Spring 2021

Introduction to Probability

Aaron J. Molstad, University of Florida

Instructor information: Aaron J. Molstad

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Course objective: The sequence of courses STA 4321/4322 (rep. 5325-5328) provides a formal and systematic introduction to mathematical statistics for students who have passed three semesters of standard undergraduate level calculus. STA 4321 & STA 5325 introduces the background in probability that is necessary to understand the classical statistical theory introduced in STA 4322/5328.

Course topics: Major topics include the basic formal elements of probability, discrete and continuous random variables, multivariate distributions, distributions of functions of random variables, and fundamental limit theorems. A list of topics can be found here: ajmolstad.github.io/F19_STA4321.

Prerequisites: MAC 2313 (or equivalent third semester calculus course). A well prepared student should have taken an introductory statistics course, such as STA 2023 or STA 3032.

Course webpage: Course materials (e.g., homework assignments and due dates) will be posted to ajmolstad.github.io/S21_STA4321. A link to this page will be available on the course eLearning site, where students' grades will be posted. Please check this site regularly for updates and announcements. Course documents and important information, including homework exercises and solutions, sample exams and special announcements, will be posted here.

Office hours: Both the instructor's and teaching assistant's office hours will take place on Zoom at a time and day to be announced. Links to office hours will be posted on the course webpage.

Textbook: Wackerly, Mendenhall, and Scheaffer, *Mathematical Statistics with Applications* (7th ed), Duxbury Press (Thomson Brooks/Cole Publishing), 2008.

- Note that exams will be based on material presented in lectures, which will approximately cover Chapters 1-7 of the textbook. **The textbook is not required**, but will be a very helpful resource for the suggested readings and many homework exercises will be from the textbook.

Assessment: Course grades will be based on nine homework assignments and three in-class examinations. Of the nine homework assignments, the average of the highest eight assignments will account for 30% of the course grade. Of the in-class exams, your highest two exam scores will each count for 25% of course grade, and your lowest exam score will count for 20% of your course grade.

Homework assignments will be submitted and graded electronically through the course elearning site. Exams will be given on Honorlock from 7:00 - 9:00pm on the days they are scheduled for.

- *Tentative exam dates:*
 1. Monday, February 8th
 2. Monday, March 15th
 3. Wednesday, April 21st
- *Tentative homework due dates (approximate lectures covered):*
 1. Wednesday, January 20th (Lectures 2 - 5)
 2. Wednesday, January 27th (Lectures 6 - 8)
 3. Wednesday, February 3rd (Lectures 9 - 11)
 4. Wednesday, February 17th (Lectures 12 - 18)
 5. Wednesday, February 24th (Lectures 19 - 21)
 6. Wednesday, March 10th (Lectures 22 - 24)
 7. Wednesday, March 24th (Lectures 25 - 28)
 8. Wednesday, April 7th (Lectures 29 - 32)
 9. Wednesday, April 14th (Lectures 33 -)

Grading scales: Letter grades will be assigned based on the following cutoffs:

Grade	Percentile
A	100% - 93.33%
A-	93.33% - 90.00%
B+	90.00% - 86.67%
B	86.67% - 83.33%
B-	83.33% - 80.00%
⋮	⋮
D-	63.33% - 60.00%
F	60.00% - 0.00%

The instructor may adjust cutoffs downward (i.e., lower the percentile needed to achieve a certain letter grade) when assigning final course grades.

Lectures. For those taking the course online, recorded lectures will be posted on the course webpage by 5:00pm on lecture days (Monday, Wednesday, and Friday).

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

Missed exam. Missed exams will receive a grade of zero, except in the cases of emergency. If an exam will be missed for a non-emergency reason, the student must notify the instructor *at least two weeks prior* to the exam date and provide proper documentation. Refer to for specifics on course attendance policy and missed exam policy.

Incomplete policy. The grade of "Incomplete" can be assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. In particular, an "Incomplete" will be given if the student presents evidence from a certified professional that the student is unable to complete the course. In addition, the student must have a passing grade at the time of the incomplete request in order to receive the "Incomplete". An

"Incomplete" requires a written agreement between instructor and student found here <https://clas.ufl.edu/files/2019/02/CLASIncompleteGradeContract.pdf>.

Students with Disabilities. Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.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.

Online course evaluation process. Students are expected to provide feedback on the quality of instruction in this course by completing evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these evaluations are available to students at <https://evaluations.ufl.edu/results/>.

Virtual class consent. Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.