



STA 4321 – Introduction to Probability (24205)

Fall 2025

Period 8: Monday, Wednesday, Friday 3pm – 3.50pm

Room: Leigh Hall (LEI 0207)

Instructor:

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Office Hours:

T(Period 5) and R(Period 5 and 8)

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Office Hours:

TBD

eLearning Course Webpage on Canvas: <http://elearning.ufl.edu/>

Catalog Description

Theory of probability including: counting, conditional probability, independence, additive and multiplicative laws, Bayes' Rule. Discrete and continuous random variables, their distributions, moments and moment generating functions. Multivariate probability distributions, independence, covariance. Distributions of functions of random variables, sampling distributions, central limit theorem.

Prerequisite(s)

STA 2023 or STA 3032 or MAC 2313 (or equivalent, like MAC 3474).

Credit Hours

This is a 3 credit hour class

Course Objectives and Goals

By the end of the course successful students should have achieved the following learning goals: (i) A clear understanding of the principles and methods in probability, (ii) the skill to know when and how statistics might be useful in a variety of problems, (iii) the skills to analyze a probability question, (iv) The ability to provide correct interpretations of results and to recommend appropriate decisions, (v) the possession of strong mathematics and statistics skills, and (vi) the possession of skills directed to the communication of statistical results to a variety of audiences.

Required Text(s)

Mathematical Statistics with Applications, 7th edition by Wackerly, Mendenhall, Schaeffer.

Calculator(s)

Any scientific or graphing calculator must not be used for quizzes, and exams. Internet-enabled electronic devices, such as cell phones or tablets cannot be used either during exams.

Tentative Schedule of Course Topics

	Chapters from Notes	Description
1-2	2	Probability
3-5	3	Discrete Random Variables and Their Probability Distributions
Exam 1		
5-8	4	Continuous Variables and Their Probability Distributions
Exam 2		
8-11	5	Multivariate Probability Distributions
Exam 3		
11-12	6	Functions of Random Variables
12-14	7	Sampling Distributions and the Central Limit Theorem
Exam 4		

Course Assignments

The course assignments will be three (4) exams, 5 quizzes and six (6) to eight(8) homework assignments.

(A) Exams

Three (3) exams will be held in class will be administered tentatively scheduled as follows:

- Exam 1: Friday, September 19
- Exam 2: Wednesday, October 15
- Exam 3: Friday, November 14
- Exam 4: Friday, December 12

For the exam, you may bring a hand written formula sheet. No calculators or electronic devices.

If a student knows they are unable to take an exam at the scheduled time, they must notify the instructor seven days prior to the exam date. Each case will be reviewed individually. Valid and detailed documentation is a prerequisite under such extenuating circumstances. A makeup exam may not be guaranteed. In case of an illness, the instructor must be notified by 11:00am on the day of the exam and the student must provide a medical excuse. A grade of zero is the minimum punishment of any type of dishonesty on an exam.

(B) Homework

A total of 6-8 homework assignments will be given throughout the semester, each worth 30 points. Homework assignments will be posted on the e-Learning course page. The homework due dates are below. The homework is to be turned in to the eLearning system on the due date. Any homework assignment received after 11:59 pm on the due date is subject to a 5-point penalty out of 30 points for each day after the due date (for example the maximum score for homework turned in one day late would be 20 points).

The homework must be typed. You may use any document editing software to type up your solutions. All code must be included that was used to produce results to answer the questions. It is suggested to use R Markdown to type the solutions.

Homework is assigned to help reinforce the material learned in class—not just to get the right answer and improve your course grade. Homework solutions must show all formulas and steps used to arrive at the answer and be the sole work of each individual student.

Total Course Points and Grades

Grades will be posted on the e-Learning course page at <http://elearning.ufl.edu/>. The current UF grading policies for assigning grade points is available at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

Assignment	Percentage
Exam 1	15%
Exam 2	15%
Exam 3	15%
Exam 4	15%
Homework Assignments	25%
Quiz	15%
Total	100 %

Letter Grade Distribution:

Letter	Points
A	90 to 100
A-	87 to 89.9
B+	84 to 86.9
B	81 to 83.9
B-	77 to 80.9
C+	74 to 76.9
C	70 to 73.9
C-	66 to 69.9
D	62 to 65.9
E	61.9 and below

Statistics Major, Data Science Major, and Statistics Minor

STA 4321 is a 3 credit-hour course that satisfies a requirement for the Statistics Major and Minor and the Data Science Major. Dr. Demetris Athienitis is the academic advisor for undergraduate statistics majors and minors and data science majors. For more information on advising, see <https://stat.ufl.edu/academics/undergraduate/>

School Closures

If classes at the University of Florida are canceled, the course will be suspended until the university re-opens. The University will announce this closure on the University of Florida homepage. Any announcements about the course will be posted at the course e-Learning webpage.

Course Policies

The instructor reserves the right to update parts of this syllabus in the event of extenuating circumstances (such as changing the due dates for homework and quizzes or exam dates, eliminating or modifying course material, etc.). Students will promptly be notified of any changes.

Privacy Policies

Student records are confidential. Only information designated “UF directory information” may be released without your written consent. UF views each student as the primary contact for all communication. If your parents contact me about your grade, attendance or other information that is not

“UF directory information”, they will be directed to contact you. More information can be found at <https://catalog.ufl.edu/UGRD/academic-regulations/ferpa-confidentiality-student-records/>

E-mail

E-mail relating to information about the class should be sent to the instructor at ab.sudip@ufl.edu or through the course management system. Your message will be answered within one working day, in most cases. However, we ask that you refer to this syllabus and the course website to try to find the answers yourself. Questions regarding the material covered should be asked before, during, or after class, at the instructor’s office hours, or at the teaching assistant’s office hours. It is often difficult to answer questions regarding material through e-mail. Questions about quizzes should be sent to the instructor and it should include the quiz number and question number.

Make-up Policy

The requirements of this course for class attendance, exams, assignments, and other work are consistent with university policies. See UF Academic Regulations and Policies for more information on university attendance policies.

University Honor Code

University of Florida students are bound by the Honor Pledge. On all work submitted for credit by a student, the following pledge is required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Student Honor Code and Conduct Code (Regulation 4.040) specifies a number of behaviors that are in violation of this code, as well as the process for reported allegations and sanctions that may be implemented. All potential violations of the code will be reported to Student Conduct and Conflict Resolution. If a student is found responsible for an Honor Code violation in this course, the instructor will enter a Grade Adjustment sanction which may be up to or including failure of the course.

Students with Disabilities

Students who require special accommodations in class or during exams should first register with the Disability Resource Center at 352-392-8565, <https://disability.ufl.edu/> by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation for an exam or quiz. The instructor must be emailed the form at least 7 days before an exam or quiz for accommodations to be arranged.

Grading

Grades will be changed only when an error has been made; negotiation is not appropriate.

Incomplete

Incomplete grades are only assigned when extraordinary circumstances (such as an accident, or extended hospitalization), arising after the date for dropping the course, prevent the student from completing the course requirements. Having a failing grade in the course is not a valid reason for requesting an Incomplete.

Materials and Supplies Fee

N/A

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://gatorevals.aa.ufl.edu/>. Evaluations are typically open during the few weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at

<https://gatorevals.aa.ufl.edu/instructors/instructor-reports/>.

Finally, this course complies with all UF policies. For information on those policies and for a list of campus resources, please see this page: <https://go.ufl.edu/syllabuspolices>.