

**STA4321 - STA5323 Introduction to Mathematical Statistics-SPRING-2025**

**Days/Time/Zoom/Notes:** TT 3:05PM - 4:20PM. Class notes are posted online on the instructor's webpage.

**Instructor:** Professor Vic Patrangenaru

**Online class**

**E-mail:** vic@stat.fsu.edu

**Office hours:** TT 2:15 PM - 2:45 PM

**Grader :** Mr. Musab Alamoudi

**Grader's E-mail:** mma21k@fsu.edu

**Textbook:** Statistical Inference, Second Edition, by George Casella and Roger Berger.

ISBN: 0534243126

**Prerequisite:** a grade of C or higher in MAC 2313 (Calculus III)

**Course Outline:** (following the book)

Chapter 1 Probability Theory

Chapter 2 Transformations and Expectations

Chapter 3 Common Families of Distributions

Chapter 4 Multiple Random Variables

Chapter 5 Properties of a Random Sample

**Course Topics:**

STA4321 - STA5323 is a course designed to give students both an intuitive and a logical account of basic probability needed for statistics. Upon completion of the course students should master concepts such as probability space; counting principles; conditional probability; Bayes' rule; independence; distributions of random variables; joint,

marginal and conditional distributions of multivariate random vectors; expectations ; sampling distributions . Time depending the course will also cover limiting distributions, the Central Limit Theorem and its applications.

**Grading:**

The course grade will be calculated on the basis on homework (30%), midterm exam 30%, and a final exam of 40%, on Tuesday, April 29, 5:30 p.m. - 7:30 p.m. The date of the first exam will be announced in class. There will be no make ups. Homework will be collected typically on Thursdays. This is a fast paced course- attendance is paramount. Grading scale up to 59.999% : F, 60% - 69.999% : D-, D, D+, 70% - 79.999% : C-, C, C+, 80% - 89.999% : B-, B, B+, 90% - 93.333%: A-, 93.334 or higher : A.

**Active attendance** adds up to 5 bonus points. If you miss classes without timely announcing the absence with a documented excuse, and having it approved, the extra credit is lost.

**University Attendance Policy:** Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness. For other important dates see <http://registrar.fsu.edu>

**Academic Honor Policy:** The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and

responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to “...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University.” (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

**Americans With Disabilities Act:** Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the instructor via e-mail, and the:

Student Disability Resource Center  
874 Traditions Way  
108 Student Services Building  
Florida State University  
Tallahassee, FL 32306-4167  
(850) 644-9566 (voice), (850) 644-8504 (TDD)  
[sdrc@admin.fsu.edu](mailto:sdrc@admin.fsu.edu)  
<http://www.disabilitycenter.fsu.edu/>

**Disclaimer:** This syllabus provides a general plan; deviations may be necessary.