

STA 551: Introduction to Probability, 3 credits

Pre-requisite: grade of at least C in 290 and MAT 293 or permission of instructor

Textbook

Required: John Freund's Mathematical Statistics with Applications by Miller & Miller, Prentice Hall

Topics to be covered

It is a calculus based course and is the first course in a two-course sequence. It will be followed by STA 552 in the spring semester. In this course, we will cover Chapters 1-8 from the required text. Most of the remaining chapters are covered in STA 552. Specific topics to be covered in STA 551 include:

Permutations and combinations; sample space, events and probabilities; dependent and independent events; discrete and continuous probability distributions; joint, marginal and conditional distributions; expectation and moment generating functions; multivariate normal distribution; sampling distributions (Chi-Square, t and F); introduction to some software tools to calculate probabilities and to fit probability distributions to given data

Course Objectives

After completing this course, you should be able to

- Understand probability and its various laws.
- Understand various discrete and continuous probability distributions.
- Learn how to fit appropriate probability distribution to given data
- Understand the concept of moment generating Function.
- Understand various sampling distributions.
- Appreciate the significance of Central Limit Theorem.

Grades

Grades will be based on the following components.

Homework Assignments, Two Midterm Exams and One Final Exam.

Dates for the exams will be announced in class at least a week in advance. Exams will be closed book and closed notes except that you can bring a one-sided 3x5 note card as crib sheet for each exam. Make-up exams may be given, at instructor's discretion, only in case of documented emergencies.

Extra Credit

Your final course grade may be raised, at instructor's discretion, by up to 2% points based on active class participation

Grading Scale

90 and above	A- or A or A+
80 – 89	B-, B or B+
70 – 79	C-, C or C+
60-69	D-, D or D+
Below 60	F

Not all of these grade options are available for graduate students. A slight variation to this rule may be possible based on class averages.

Attendance Policy

You are expected to attend all classes but there is no formal attendance policy. You will be responsible for knowing the material covered during any lecture you happen to miss. Also, you will be responsible for knowing any announcements that may be made in class regarding exam schedules etc.

Use of Blackboard

Assignments and all major announcements will be posted on the blackboard site for the course. Make a habit of checking the site regularly. You will need to activate your UNCG computer account to be able to visit the blackboard website (<https://blackboard.uncg.edu>).

Academic Integrity

Students are encouraged to discuss solutions to assignments, but each student is expected to write-up his or her solutions independently. Copying other people's work is plagiarism and is an Honor Code violation. You are responsible for knowing and abiding by the university academic integrity policy.

Disabilities

If you have a documented disability and wish to discuss academic accommodations, please contact me as soon as possible