

## **STA 352: Statistical Inference**

3 credits

**Prerequisites:** Grade of at least “C” in STA 290 or permission of instructor

(Note: This is a *calculus-based* course. The student is expected to have knowledge of basic knowledge of differential and integral calculus)

### ***Textbook (Required):***

***Probability and Statistical Inference, 8<sup>th</sup> Ed.*** By Robert Hogg and Elliott Tanis, Prentice Hall, ISBN: 978-0-321-58475-5

### ***Topics to be covered***

#### **The course will cover**

Descriptive and inferential statistics; Emphasis on sampling distributions; theory of estimation and tests of hypotheses; linear regression; correlation; and analysis of variance

#### **Specific topics to be covered include:**

Basic concepts of mathematical statistics; sampling distributions, central limit theorem, discrete approximations, properties of estimators, confidence intervals for means, proportions and variances, sample size for estimation, significance tests for means and proportions, power and sample size for testing, simple linear regression, analysis of contingency tables.

**You will be expected to be familiar with the topics covered in Chapters 1-5 from prior probability courses. In this course, we will cover Chapters 6-9 and parts of Chapter 10**

### ***Course Objectives***

After completing the course, students will understand the theory and practice of point and interval estimation, significance testing, and simple linear regression.

### ***Grades***

Grades will be based on the following components.

Homework Assignments/Computer Projects, Two Midterm Exams, One Final Exam.

### ***Grading Scale***

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

**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 might be made in any 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 with others 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 UNCG Academic Integrity Policy (<http://sa.uncg.edu/handbook/academic-integrity-policy/>)

### ***Disabilities***

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