

## MA 147 ELEMENTARY STATISTICS

**Course Description: (3 semester hours).** An algebra-based first course in basic applied statistics with applications in various fields. Includes descriptive statistics, probability, sampling and sampling distributions, statistical inference, tests of hypotheses, regression and correlation.

**Prerequisite:** MA 100 or 112 or equivalent.

**Required Materials:** You will need to bring a calculator each day to this class. Any calculator will do as long as it has the basic arithmetic functions and a button.

**Course Objectives:** The primary objective of this course is to make available to the students a standard first course in basic applied statistics with applications from various fields. Other objectives include:

1. To provide an overview of the broad applicability and utilization of statistical methods.
2. To provide enrichment in the statistics area.
3. To prepare students for further study in applied and theoretical statistics.

*Students should leave the course with a deeper understanding of the role and relevance of statistics in our society.*

### Course Content:

1. Frequency distributions
2. Descriptive statistics including grouped data
3. Probability; including mathematical expectation and basic rules of probability.
4. Well known probability distributions (Normal, Binomial and Hypergeometric).
5. Random Sampling.
6. Estimation and Confidence Intervals.
7. Hypothesis testing (including, among others; test concerning means, difference between means, proportions, difference between proportions, chi-square, and analysis of variance).

**Assessment of Student Progress:** *There will be 3 or 4 tests, and a comprehensive final examination. Each student is required to attend class regularly, do and turn in homework assignments.*

### ACCOMMODATION STATEMENT:

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact **Developmental Services** prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact **Developmental Services**.

UNIVERSITY OF NORTH ALABAMA