

**STATISTICAL METHODS I**  
**STAT 3000/8005**

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**1.0 Course Objectives**

- 1.1 Overview of Content and Purpose:** (3 hours) Distributions, introduction to measures of central values and dispersion, population and sample, the normal distribution, inference: single population, inference: two populations, introduction to analysis of variance. Statistical packages on the computer will also be utilized in this course.
- 1.2 For Whom Intended:** Students from all areas who may desire some knowledge of statistical methodology.
- 1.3 Prerequisites:** MATH 1310 or equivalent
- 1.4 Unusual Circumstances:** None

**2.0 Objectives**

- 2.1 Performance Objectives for the Student:** To introduce students to statistical tests and procedures. To introduce the students to computing aspects of the software packages Minitab, SPSS, EXCEL and SAS.

**3.0 Content and Organization**

- 3.1 Topics:**
1. Measures of central tendency and dispersion as well as graphical display.
  2. Probability and probability distributions for random variables.
  3. One-sample tests: mean, standard, deviation, and proportion.
  4. Contingency tables.
  5. Interactive and batch computing using the four software packages Minitab, SPSS, EXCEL and SAS.

**4.0 Teaching Methodology**

- 4.1 Methods to be Used:** The method of instruction is presented primarily in lecture form. Graduate students in the course do four projects (not required of undergraduate students). Chapters one through nine of the text are covered. The software packages Minitab, SPSS, EXCEL and SAS are utilized.

**5.0 Evaluation**

- 5.1 Basis for Evaluating Student Performance:** The course is graded by giving weekly tests, computer assignments, and a comprehensive final.

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**6.0 Resource Material**

**6.1 Textbook(s) or Other Required Reading:** McClave, *Statistics*, 10<sup>th</sup> edition, Prentice Hall publisher.

**6.2 Current Bibliography of Resources:** Johnson, *Elementary Statistics*, 6<sup>th</sup> edition, PWS-King.  
Snedecor and Cochran, *Statistical Methods*, 8<sup>th</sup> edition, Iowa State University Press.

Dixon and Massey, *Introduction to Statistical Methods and Data Analysis*, 4<sup>th</sup> edition, Addison Wesley.