

**Bowling Green State University**  
**MASTER SYLLABUS**  
**STAT 212: ELEMENTARY STATISTICAL METHODS II**  
**Revised 3-19-02**

**I. Catalog Description**

STAT 212. Elementary Statistical Methods 11 (3), Fall, Spring, Summer. Estimation, hypothesis testing, regression, correlation, analysis of variance and contingency tables. Prerequisite: STAT 211.

**II. Course Goals**

STAT 212 is a continuation of STAT 211. This course is heavily oriented towards data analysis and methodology. The course is designed for the following specific goals:

1. To expand students' knowledge of statistical methods for analyzing data that covers a wide variety of business applications.
2. To develop students' ability to identify the appropriate statistical method for a particular problem.
3. To develop students' ability to understand the limitations of the methods presented and identify situations when professional statistical advice is needed.
4. To develop students' ability to interpret the results of the statistical analysis and draw the appropriate conclusions.
5. To develop students' skills in using statistical software for decision-making.
6. To develop students' critical thinking skills.
7. To help students appreciate the importance of statistics in business.

**III. Student Learning Outcomes**

Upon successful completion of the course work, students are expected to:

1. Demonstrate knowledge of various statistical methods of inference and analysis.
2. Know how to identify the appropriate statistical method for a particular problem.
3. Demonstrate ability to properly interpret the results of a statistical analysis in the context of a problem and make an informed decision.
4. Demonstrate skill in using statistical software to aid in statistical analysis.

#### **IV. Course Content**

Review of Introduction to Inference	10%
Inference about a Single Population	15%
Inference about Two Populations	15%
Analysis of Variance	15%
Contingency Tables	15%
Simple Regression and Correlation	20%
Multiple Regression	10%

#### **IV. Course Format and Teaching Methodology**

Each section of the course is taught by a faculty member in Applied Statistics. Sections have a maximum size of 45 students and meet individually three sessions per week in a primarily lecture-oriented format. Most sections meet in a computer lab on a regular basis, with hands-on activities involving statistical software.

#### **V. Grading Evaluations**

Grades are determined based on requirements, which vary from one instructor to another. Standard requirements are exams and computer assignments, as well as regular assignments. Projects and case studies are encouraged, and these usually include submission of written reports or oral presentations.

#### **VI. Learning Assessment**

Assessments of the extent to which students meet the learning outcomes consist of the individual faculty members' assessments of common examinations, assignments, class discussions, quizzes and other class activities.