Dakota College at Bottineau Course Syllabus

Course Prefix/Number/Title: 240 Applied Statistics, 4 credits

Course Description: Sampling, descriptive statistics, probability, estimation, hypothesis testing and statistical inference, ANOVA.

Course Objectives:

1. To develop an understanding of statistical symbols.
2. Provide student with basic understanding of methods used in classification and analysis of variation.
3. Expose student to practical application by means of conducting experiments and solving problems.
4. To develop knowledge and application of a statistical computer program.

Instructor: Betty Rehfuss

Office: Nelson Science Center 112

Office Hours: 11:00-12:00 and 3:00-4:00 MTWRF

Phone: 228-5424

Email: Betty.Rehfuss@dakotacollege.edu

Lecture/Lab Schedule: 10:00-10:50 MWF, 1:00-1:50 T

Textbook(s): Statistics by James T. McClave & Frank H. Dietrich, II

Course Requirements:

Evaluation

1. Successful completion of application problems in a laboratory setting.
2. Chapter and final tests to measure retention of foundation material and competency in using general principles.

Grading Procedure

Examinations	A = 90-100%	C = 70-79%	F=below 60%
Computer Assignments	B = 80-89%	D = 60-69%	

Tentative Course Outline:

1. What is Statistics? (2 days)
2. Methods for Describing Sets of Data (6 days)
3. Probability (6 days)
4. Discrete Random Variables (6 days)
5. Continuous Random Variables (5 days)

6. Sampling Distributions (3 days)
7. Inferences Based on a Single Sample: Estimation (6 days)
8. Inferences Based on a Single Sample: Tests of Hypotheses (4 days)
9. Inferences Based on Two Samples: Estimation and Tests of Hypotheses (4 days)
10. Analysis of Variance: Comparing More Than Two Means (4 days)

General Education Goals/Objectives:

Goal 2: Demonstrates knowledge and application of technology

Objective 4: Employs problem solving and critical thinking skills in order to solve a varietyof different problems

- Skill 1: Locates, evaluates, and applies research information
- Skill 2: Analyzes information to determine its validity
- Skill 3: Draws conclusions from information collected

Goal 3: Demonstrates the ability to convert, calculate, and analyze a variety of mathematical problems

Objective 1: Utilizes mathematical equations to solve problems

- Skill 1: Solves equations and problems using the appropriate method

Objective 2: Applies practical application of mathematics to everyday life

- Skill 1: Constructs tables, charts, graphs based on data
- Skill 2: Defines and demonstrates the use of decimals, percentages, and fractions
- Skill 3: Solves word problems

Objective 3 Employs problem solving and critical thinking skills in order to solve a variety of different problems

- Skill 1: Locates, evaluates, and applies research information
- Skill 2: Analyzes materials to determine their validity
- Skill 3: Draws conclusions from information collected

Relationship to Campus Theme: The student will use MINITAB to model application problems in nature, economics, science, psychology, etc. Communication with others will be emphasized.

Classroom Policies: The sequential nature of mathematics deems it necessary for students to attend class on a regular basis. Therefore one of the course requirements is regular attendance.

Academic Integrity: Each student will be required to do his or her own work on tests.

Disabilities and Special Needs: Accommodations will be provided on an individual basis.