

## Dakota College at Bottineau Course Syllabus

Course Prefix/Number/Title: College Algebra 103, 4 credits

Course Description: Linear and quadratic equations, radicals, exponents and logarithms, rational expressions, systems of linear equations, functional notation, graphing sequences, and series.

Course Objectives: The student will be introduced to the topics above which require certain techniques for solutions. We will develop ideas and methods for applying these techniques leading to a solution or resolution of the question. During the course the student will be exposed to the use and application of the graphics calculator in the appropriate areas.

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](mailto:Betty.Rehfuss@dakotacollege.edu)

Lecture/Lab Schedule: 9:00-9:50 MTWF

Textbook(s): College Algebra by James Stewart, Lothar Redlin, Saleem Watson, Brooks/Cole, 2009.

Course Requirements:

### **Evaluation**

Sectional tests and group quizzes to measure retention of problem solving and theory.

### **Grading Procedure**

Examinations	A = 90-100%	C = 70-79%	F=below 60%
Final Examination	B = 80-89%	D = 60-69%	
Quizzes			

Tentative Course Outline:

Real Numbers, operations and properties (6 days)

Linear Equations and Inequalities (6 days)

Polynomials: 1. Operations 2. Factoring (6 days)

Rational expressions and Polynomial Division (6 days)

Rational Exponents and Radicals (6 days)

Quadratics and the Quadratic Formula (6 days)

Graphing Linear Equations and Inequalities 1. "Manual" 2. Calculator (6 days)

Functions; linear, quadratic, polynomial, exponential, logarithmic (6 days)

Linear systems and matrices (6 days)

Sequences and Series (6 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 variety of different problems

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 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 2: Analyzes materials to determine their validity

Skill 3: Draws conclusions from information collected

Relationship to Campus Theme: The student will use the graphing calculator 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.