Finite Math

MATH 104 Finite Math (3 semester credits)

Course Description: An extension of basic algebra to areas that have applications in the economic, behavior, social, and life science. Topics include systems of linear equations and inequalities, matrices, linear programming, mathematics of finance, elementary probability and descriptive statistics.

Prerequisite(s): ASC 093 or ACT Math Score of 21 or Placement Test

Instructor: Harmony Richman

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Rhoades 104E

Delivery Method: Online

Office Hours: By appointment

Textbook: Finite Mathematics 11th Edition; Lial, Greenwell and Ritchey. ISBN-10: 0133864472 ISBN-13 9780133864472

Course Requirements: Students are expected to:

- Participate regularly in class discussions.
- Submit graded assignments by dates posted on the course calendar.
- Read assigned textbook chapters.
- Do ungraded, independent practice exercises.
- Submit assigned textbook problems as pdf or jpeg files.
- Complete graded quizzes/tests.

Course Objectives/Student Outcomes: The students will be able to:

- Work with elementary probability.
- Work with mathematics of finance.
- Solve systems of linear equations.
- Solve systems of linear inequalities.
- Work with linear programming.
- Work with statistics.
- Demonstrate an understanding of matrices.

Relationship to Campus Theme: The course addresses the campus theme by exploring real world applications of mathematics in economics, behavioral, social and life science.

Grading Criteria: Your final grade is determined by dividing total points earned by total points possible. Points will be awarded for math activities, selected textbook exercises, online math assignments, reflections, and tests.

Grades will be calculated using the following criteria:

A	90% - 100%	B	80% - 89%
C	70% - 79%	D	60% - 69%
F	≤ 59%		

Schedule (subject to change):

Week	Topic
Week 1	Welcome! 2.1 Solution of Linear Systems by the Echelon Method 2.2 Solution of Linear Systems by the Gauss-Jordan Method
Week 2	2.3 Addition and Subtraction of Matrices 2.4 Multiplication of Matrices
Week 3	2.5 Matrix Inverses 2.6 Input-Output Models
Week 4	3.1 Graphing Linear Inequalities 3.2 Solving Linear Programming Problems Graphically
Week 5	3.3 Applications of Linear Programming Chapter 2 and 3 Test
Week 6	5.1 Simple and Compound Interest 5.2 Future Value of an Annuity
Week 7	5.3 Present Value of an Annuity; Amortization Chapter 5 Test
Week 8	7.1 Sets 7.2 Applications of Venn Diagrams
Week 9	7.3 Introduction to Probability 7.4 Basic Concepts of Probability
Week 10	7.5 Conditional Probability; Independent Events Chapter 7 Test
Week 11	8.1 The Multiplication Principle; Permutations 8.2 Combinations
Week 12	8.3 Probability Applications of Counting Principles 8.4 Binomial Probability
Week 13	8.5 Probability Distributions; Expected Value Chapter 8 Test
Week 14	9.1 Frequency Distributions; Measures of Central Tendency 9.2 Measures of Variation
Week 15	9.3 The Normal Distribution 9.4 Normal Approximation to the Binomial Distribution
Week 16	Final Project Chapter 9 Test

Student Email Policy: Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity: The academic community is operated on the basis of honesty, integrity and fair play. It is the expectation that all students, as members of the college community, adhere to the highest levels of academic integrity. This means that:

- Students are responsible for submitting their own work. Student work must not be plagiarized.
- Students must not work together on graded assignments without authorization from the instructor or get help from people, technological resources, textbooks, notes, etc. on examinations.

Violations of academic principles such as cheating, plagiarism or other academic improprieties will be handled using the guidelines outlined in the student handbook on pages 18, 19, and 37.

Disabilities and Special Needs: If you have a disability for which you need accommodation, contact the Learning Center to request disability support services: phone 701-228-5477 or toll-free 1-888-918-5623.