DAKOTA COLLEGE AT BOTTINEAU

COURSE SYLLABUS

Course Prefix/Number/Title: MATH 104 – Finite Math

Number of Credits: 3

Course Description:
This course addresses areas that have application in the economic, behavioral, social, and life sciences. Topics include linear modeling, systems of linear equations and inequalities; matrix operations; linear programming; mathematics of finance; combinatorics, probability, and expected value; and descriptive statistics. Appropriate use of mathematical technology will be integrated throughout the course.

Pre-/Co-requisites: ASC 94 Beginning Algebra with a grade of C or higher, or appropriate math placement test score

Course Objectives:
Upon completion of the course the successful learner will interpret mathematical models and solutions to make informed decisions by

1. creating linear models to make predictions.
2. solving systems of linear equations algebraically, graphically, and through matrix operations.
3. solving systems of linear inequalities as they relate to mathematical models.
4. using linear programming to solve optimization problems.
5. solving financial application problems related to personal and consumer economics.
6. computing basic combinatorics to count items in a set.
7. computing the probability of an event.
8. computing expected value for long-term analysis.
9. computing descriptive statistics to summarize the characteristics of a data set.
10. creating statistical graphs to visualize data in an organized manner.

Instructor: Tracy Chisholm

Office: Nelson Science Center, Room 111

Office Hours: MTWRF 2-3pm or by appointment

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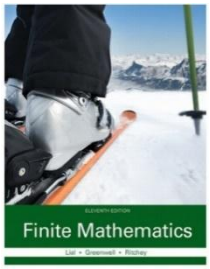
Lecture/Lab Schedule: MWF 9-9:50am

Monday	Tuesday	Wednesday	Thursday	Friday
NSC 124		NSC 124		NSC 124
9-9:50am		9-9:50am		9-9:50am

Textbook(s):
Finite Mathematics 11th Edition by Lial, Greenwell, and Ritchey with MyMathLab online learning software. Pearson Publishing.



Course Requirements:
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. Learning math requires practice, mistakes, and more practice. Understanding the examples provided by the instructor and textbook is a good first step. However, to truly know the material, you should be able to look at a problem, know how to proceed, and carry out the steps WITHOUT ASSISTANCE. The independent practice and graded discussions provide opportunities for you to get to that point. Passing grades on quizzes and tests demonstrate that you have indeed learned the skills taught.

Independent Practice: Each section will have a set of problems assigned. These problems are for you to practice and prepare for the discussions and tests. All problems will be odd so that they answers are available at the back of the textbook.

Homework: Most sections will have graded problems applying what was learned in the section. These are due by Sunday at 11:59pm of the week they were assigned.

Tests: Five graded tests are administered over the semester. Students are allowed one attempt on each test and must be completed in one sitting. If a student leaves the classroom during a test, the test will be collected and graded. Tests must be taken on the day they are given or previous arrangements must be made prior to the test day. **If you miss an exam you must contact me within 24 hours of the missed exam to arrange for a time to make up the exam. Exams must be made up within 72 hours of the original exam time. If you do not contact me within 24 hours, a grade of 0 will be entered for the exam that was missed. Students are only allowed to make up ONE exam per course. The exam grade will be docked 10% per day for late points.** ***Cheating on tests will not be tolerated. If you are caught cheating, that will result in an automatic 0 for the exam.***

A = 90-100% B = 80-89% C = 70-79% D = 60-69%

Tentative Course Outline:

Chapter	Topics	Dates
Chapter 2 Sections 2.1-2.6	Systems of Linear Equations and Matrices	Weeks 1-3
Chapter 3 Sections 3.1-3.3	Linear Programming: The Graphical Method	Weeks 4-5
Chapter 5 Sections 5.1-5.3	Mathematics of Finance	Weeks 6-7
Chapter 7 Sections 7.1-7.5	Sets and Probability	Weeks 8-10
Chapter 8 Sections 8.1-8.5	Counting Principles: Further Probability Topics	Weeks 11-13
Chapter 9 Sections 9.1-9.4	Statistics	Weeks 14-16

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):
Competency 3: Demonstrates mathematical understanding
Learning Outcome 1: Utilizes appropriate mathematical techniques
Learning Outcome 2: Employs critical thinking skills

Relationship to Campus Focus:
Students will explore real-world applications of mathematics in nature, economics, statistics, behavioral, social and life sciences.

Classroom Policies:

- Attendance and participation is expected. You are responsible for the activities of each class period. If you know of a conflict ahead of time, you are welcome to submit assignments early.
- Show up to class on time and be prepared (pencil, notebook, calculator, etc).
- Cell phones should be off/silenced and put away. Computers and tablets are welcome in the classroom for note-taking purposes only. If students abuse this privilege, the instructor reserves the right to ban computers from the lecture periods.

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:
According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs:
Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

Title IX:
Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.

AI Student Policy:
Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

RESPONSIBILITIES

Students	• Responsible to follow the syllabus and assignment instructions regarding use of generative AI for all academic work. • Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment. • In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.
Faculty	• Determine if the use of generative AI could enhance student learning in any assignment of project. • Clearly indicate in all course syllabi if generative AI is allowable for any academic work.

	• If allowable, give specific parameters for how and when generative AI may be used. • If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.