



Course Prefix/Number/Title

MATH 103: College Algebra Online

Number of Credits:

4 credits

Course Description:

Throughout this intensive four credit course you will be asked to complete daily homework assignments, chapter quizzes, as well as a mid-term and final exam. Topics covered will include linear and quadratic equations, radicals, exponents and logarithms, rational expressions, system of linear equations, functional notation, graphing sequences, series, and matrices. This course will utilize the MyMathLab system for homework and quizzes. Tests will be taking in MyMathLab with the aid of a proctor. While we will have no direct contact, I am here to help! Utilize the “help me solve this!” feature in MyMathLab when you are stuck on a question—or email me when you are finding a section or chapter particularly difficult. You are not in this alone!

Pre-/Co-requisites:

ASC 093 with a “C” or better, or a designated math placement test score.

Course Objectives:

- 1) Students will demonstrate an understanding of relations and functions
- 2) Students will be able to work with equations and inequalities
- 3) Students will be able to work with complex numbers
- 4) Students will be able to work with rational and polynomial expressions
- 5) Students will be successful in working with exponential and logarithmic functions
- 6) Students will be able to solve systems of linear equations
- 7) Students will create and use matrices to solve systems of equations

Instructor:

Mrs. Connie Blair

Office:

Online!

Office Hours:

Please email and/or send me a message in Blackboard with any and all questions. I check these messages periodically throughout the week, but please allow up to 48 hours for a response (although I try to respond much more quickly than this!).

Phone:

If you are having technical difficulties, please contact the Distance Education Office at (701) 228-2479 or 1-888-918-5623. If you have questions about the material, please call me during reasonable hours at (512) 608-2842.



Email:

connie.blair@ndus.ed

Lecture/Lab Schedule:

You will be asked to complete an average of four assignments per week, preferable one a day for four days. You must make an 80% or better on an assignment to move onto the next assignment.

Textbook(s):

MyMathLab access code with access to *College Algebra: Graphs and Models*. 6th edition by Bittinger, Beecher, Ellenbogen, and Penna.

Order by email at bookstore@dakotacollege.edu or by calling (701) 228-5458

Course Requirements:

Learning algebra is an **investment of time**. Algebra is learned best by practicing, reflecting, and practicing some more. While understanding the steps in the topic explanations and video presentations is a good first step, to truly master the material you should be able to look a problem, know how to proceed and be able to carry out the steps **WITHOUT ASSISTANCE**. The multiple attempts allowed during independent practice (including homework and chapter quizzes) in MyMathLab provides opportunities for you to get to that point. Passing grades on the mid-term and final exam demonstrate that you have indeed mastered the skills taught.

Tentative Course Outline:

Chapter 1: Graphs, Functions, and Models

Chapter 2: More on Functions

Chapter 3: Quadratic Functions and Equations; Inequalities

Mid-Term Exam

Chapter 4: Polynomial Functions and Rational Functions

Chapter 5: Exponential Functions and Logarithmic Functions

Chapter 6: Systems of Equations and Matrices

Final Exam

**General Education Competency/Learning Outcome(s) OR CTE
Competency/Department Learning Outcome(s):**

- Goal 2: Demonstrates technological literacy
 - Learning Outcome 1: Uses Appropriate application software to complete assignments
 - Performance Indicator 3: Demonstrates competencies in electronic communication.
 - Learning Outcome 2: Uses electronic resources to solve problems
 - Performance indicator 1: Selects appropriate electronic resources
 - Learning Outcome 3: Uses appropriate application software
 - Performance Indicator 1: Selects appropriate application software



- Goal 3: Demonstrates the ability to solve a variety of mathematical problems
 - Learning Outcome 1: Utilizes mathematical skills to solve problems
 - Performance Indicator 1: Solve problems using an appropriate method
 - Performance Indicator 2: Produces Graphs
 - Learning Outcome 2: Employs critical thinking skills to solve problems
 - Performance Indicator 2: Write conclusions from information collected

Relationship to Campus Focus:

The student will use algebra to solve application problems in nature, economics, science, psychology, etc. The graphing calculator will be used to represent solutions visually and to find answers to complex problems.

Classroom Policies:

- Regular participation is expected. This includes participation in MyMathLab, Blackboard discussions, and responding to emails from the instructor in a timely manner.
- Learning activities and evaluation will occur in the MyMathLab learning system and requires internet connectivity.
- Students must use ProctorU to take their mid-term and final exam. The cost is \$25 per two hour exam. The exams must be taken during the exam window stated in the course calendar.
- There will be untimed quizzes at the end of each chapter. The mid-term and final exam each have a two-hour time limit.

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.

Key Considerations for Academic Success

- Be an active participant in class every day. Use the e-mail tool to ask your classmates questions and don't forget to utilize your instructor!
- Balance school with the rest of your life. Plan enough study time to do well in this class. You can expect to spend 2-3 hours on each homework assignment.
- Use good study habits and get academic assistance at the first warning sign! If you are struggling with a topic or homework assignment don't hesitate to ask someone!
- Understand the impact of dropping classes both academically and financially.
- Don't put off for tomorrow what you can do today.



Evaluation

Homework: 10%

Section Homework will be submitted after each section in MyMathLab and can be found under the homework tab in MyMathLab. You may work ahead, but each homework assignment should be completed by the due date listed in order to stay on track in the course. Grades of 80% or higher are required to proceed to the subsequent homework assignment. There is no limit to the number of times you can complete a homework assignment and homework assignments have a final due date of midnight the night before the final exam.

Discussion Boards: 10%

There will be one discussion required per chapter. You must post twice and comment at least once.

Chapter Quizzes: 20%

Chapter quizzes are to be completed at the end of each chapter. You will get two chances per problem on each chapter quiz.

Mid-Term and Final Exam: 60%

Two proctored tests are administered over the sixteen-week term (eight weeks if this is a summer course). Students are allowed one attempt on each test and will need to utilize ProctorU to take the test. Scheduling tests with ProctorU should be taken at least ONE WEEK prior to the proctored exam. You can find information on ProctorU in Blackboard. **There will be no make ups on the mid-term and final exam.**

Letter Grades

Letter grades are assigned using the following scale:

- A 89.50%-100%
- B 79.50%-89.49%
- C 69.50%-79.49%
- D 59.50%-69.49%
- F 59.49% or lower



<u>◀ July</u>	August 2020					<u>September ▶</u>
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24 First day of classes! Complete Blackboard Discussion, MML Orientation, and Syllabus Quiz	25	26 Chapter 1.1: Introduction to Graphing	27 Chapter 1.2: Functions and Graphs	28	29
30	31 Chapter 1.3: Linear Fuctions, Slope, and Applications					



◀ August	September 2020						October ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
		1 Chapter 1.4: Equations of Lines and Modeling	2 Chapter 1.5: Linear Equations, Functions, Zeros, and Applications	3 Chapter 1.6: Solving Linear Inequalities	4 Study for Chapter 1 Quiz	5	
6 Chapter 1 Discussion due at Midnight	7 LABOR DAY CAMPUS CLOSED	8 Chapter 1 Quiz due at Midnight for full credit	9 Chapter 2.1: Increasing, Decreasing, and Piecewise Functions; Applications	10 Chapter 2.2: The Algebra of Functions	11 Chapter 2.3: The Composition of Functions	12	
13	14 Chapter 2.4: Symmetry	15 Chapter 2.5: Transformations	16 Chapter 2.6: Variation and Applications	17 Study for Chapter 2 Quiz	18	19	
20 Chapter 2 Discussion due at Midnight	21 Chapter 2 Quiz due at Midnight for full credit	22 Chapter 3.1: The Complex Numbers	23 Chapter 3.2: Quadratic Equations, Functions, Zeros, and Models	24 Chapter 3.3: Analyzing Graphs of Quadratic Functions	25	26	
27	28 Chapter 3.4: Solving Rational Equations and Radical Equations	29 Study for Chapter 3 Quiz	30 Chapter 3 Discussion due at Midnight				



<u>◀ September</u>	October 2020					<u>November ▶</u>
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Chapter 3 Quiz due at Midnight for Full Credit	2	3
4	5 Mid-Term Exam Window	6 Mid-Term Exam Window	7 Mid-Term Exam Window	8 Mid-Term Due at 5:00 PM CST	9	10
11	12	13	14	15	16 Mid-Term Grades Due	17
18	19 Chapter 4.1: Polynomial Functions and Modeling	20 Chapter 4.2: Graphing Polynomial Functions	21 Chapter 4.3: Polynomial Division, The Remainder Theorem, and the Factor Theorem	22 Chapter 4.4: Theorems about Zeros of Polynomial Functions	23	24
25	26 Chapter 4.5: Rational Functions	27 Chapter 4.6: Polynomial Inequalities and Rational Inequalities	28 Study for Chapter 4 Quiz	29	30	31



◀ October	November 2020					December ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 Chapter 4 Discussion due at Midnight	2 Chapter 4 Quiz due at Midnight for Full Credit	3 Chapter 5.1: Inverse Functions	4 Chapter 5.2: Exponential Functions and Graphs	5 Chapter 5.3: Logarithmic Functions and Graphs	6	7
8	9 Chapter 5.4: Properties of Logarithmic Functions	10 Chapter 5.5: Solving Exponential Equations and Logarithmic Equations	11 Veteran's Day Campus Closed	12 Chapter 5.6: Applications and Models: Growth and Decay; Compound Interest	13	14
15 Chapter 5 Discussion due at Midnight	16 Chapter 5 Quiz due at Midnight for Full Credit	17 Chapter 6.1: Systems of Equations in Two Variables	18 Chapter 6.2: Systems of Equations in Three Variables	19 Chapter 6.3: Matrices and Systems of Equations	20	21
22	23 Chapter 6.4: Matrix Operations	24 Chapter 6.5: Inverse of Matrices	25-27 Thanksgiving Break			28
29	30 Chapter 6.6: Determinants and Cramer's Rule					



<u>◀ November</u>	December 2020					<u>January ▶</u>
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Study for Chapter 6 Quiz	2 Chapter 6 Discussion due at Midnight	3 Chapter 6 Quiz due at Midnight for Full Credit	4	5
6	7 Study for Final Exam	8 Study for Final Exam	9 Study for Final Exam	10 Study for Final Exam	11	12
13	14 Final Exam Window	15 Final Exam Window	16 Final Exam Window	17 Final Exam Window	18 Final Exam due by 5:00 PM CST	19
20	21	22	23	24	25	26
27	28	29	30	31		