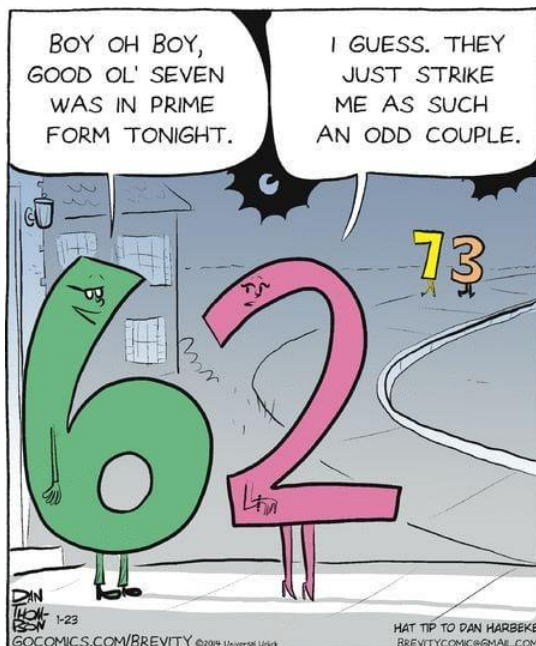


# Welcome to College Algebra Online Fall 2019



## Course Prefix/Number/Title

MATH 103: College Algebra Online

## Number of credits

4 credits

## Course Description

Welcome to College Algebra online! Throughout this intensive four credit course you will be asked to complete daily homework assignments, chapter tests, 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, and series. This course will utilize the MyMathLab system for homework and quizzes. Tests will be taken 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 e-mail 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**

Students will learn techniques for solving problems related to include linear and quadratic equations, radicals, exponents and logarithms, rational expressions, system of linear equations, functional notation, graphing sequences, and series. Students will develop *ideas* and *methods* for applying techniques to find solutions or resolutions to questions requiring algebraic reasoning. A graphing calculator (TI-83 or TI-84) may be utilized when appropriate.

## **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 immediate difficulties, please contact the Distance Education office at (701) 228-2479 or 1-888-918-5623.

## **Email**

connie.blair@ndus.edu

## **Lecture/Lab Schedule**

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

## **Textbook**

MyMathLab access code with access to *College Algebra: Graphs and Models*. 5<sup>th</sup> edition by Bittinger, Beecher, Ellenbogen, and Penna.

Order by e-mail at [bookstore@dakotacollege.edu](mailto: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 at 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 practice tests) 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 Goals/Objectives

- Goal 2: Demonstrates Knowledge and application of technology
  - Objective 2: Uses electronic resources for course related assignments and information
    - Skill 1: Selects appropriate program on the graphing calculator to solve problems
- 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 3: Solves word problems

## Relationship to Campus Theme

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.

## **NDUS Common Course Agreement**

MATH 103 College Algebra Relations and functions, equations and inequalities, complex numbers; polynomial, rational, exponential and logarithmic functions and systems of equations. Prerequisite: Math 093 or placement test Upon completion of the course the learner will be able to:

1. Students will demonstrate an understanding of relations and functions as evidenced by classroom activities and objective tests
2. Students will be able to work with equations and inequalities as evidenced by classroom activities and objective tests
3. Students will be able to work with complex numbers as evidenced by classroom activities and objective tests
4. Students will be able to work with rational and polynomial expressions as evidenced by classroom activities and objective tests
5. Students will be successful in working with exponential and logarithmic functions as evidenced by classroom activities and objective tests
6. Students will be able to solve systems of linear equations as evidenced by classroom activities and objective tests
7. Students will create and use matrices to solve systems of equations as evidenced by classroom activities and objective tests

## **Classroom Policies**

- Regular participation is expected. This includes participation in MyMathLab, Moodle, 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 arrange for a proctor in order to take their mid-term and final exam. The exams must be taken on the dates stated in the course calendar.
- Tests will be available for a limited period of time. The maximum time allowed for the midterm and final exam is two hours.

## **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.

## 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

Toll Free: 1-888-918-5623

## 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.

## Free Online Tutoring!

**Blackboard Collaborate** is a wonderful tool you can utilize to work with an on-campus tutor while remaining off campus! If interested, please contact Peggy Gregg in the Distance Education Office

**TutorND** is available for all North Dakota residents! Visit the Distance Education to login today!

**The Khan Academy** has an extensive library of content, including interactive challenges, assessments, and videos that students can access from any computer with access to the internet. If you're stuck on a topic, visit [www.khanacademy.org](http://www.khanacademy.org) and find a video and an exercise to help you out!

## Evaluation

### Homework—20%

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.

Homework Tests are to be completed at the end of each chapter. While you may work ahead, you **must** complete a homework test by the due date listed. You will receive a 30% penalty for any homework test that is not completed by midnight on the due date.

### Tests—80%

Two proctored tests are administered over the eight-week term, a mid-term and a final exam. Students are allowed one attempt on each test and will need to utilize an in-person proctor when taking these exams.

Proctor forms are due to your instructor at least ONE WEEK prior to the proctored exam. You can find the proctor forms in Moodle. Check the course calendar both in MyMathLab and at the end of the syllabus for the dates of these exams. **There will be no make-ups.**

Letter grades are assigned using the following scale:

A 89.50%-100%

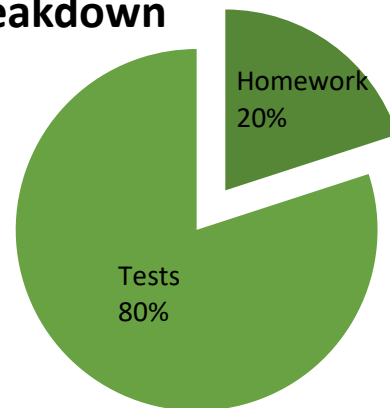
B 79.50%-89.49%

C 69.50%-79.49%

D 59.50%-69.49%

F 59.49% or lower

## Grade Breakdown



## MATH 103 Spring 2019 Course Due Dates

### Things to remember:



- Homework assignments can be completed anytime throughout the semester with no penalty, however, they must be completed before taking the homework test.
- Any homework test taken late will receive a 30% penalty
- Homework assignments and homework tests make up 20% of your grade.
- Mid-Term and Final Exams are worth 80% of your total grade and cannot be made up.

August 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	<b>26</b> First day of Class, <b>WELCOME!</b> Read through syllabus, complete syllabus quiz, and complete the Chapter O HW Assignment	<b>27</b> <b>1.1: Introduction to Graphing</b> Complete Moodle Discussion Introduction as well	<b>28</b> <b>1.2: Functions and Graphs</b>	<b>29</b> <b>1.3: Linear Functions, Slope, and Applications</b>	<b>30</b> Last day to complete Syllabus Quiz & Moodle Discussion Introduction for Credit	<b>31</b>

September 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 	3 <b>1.4: Equations of Lines and Modeling</b>	4 <b>1.5: Linear Equations, Functions, Zeros, and Applications</b> Last day to drop classes with 100% refund	5 <b>1.6: Solving Linear Inequalities</b>	6	7
8	9 <b>Study for CH 1 Homework Test</b>	10 <b>Chapter 1 Homework Test due at Midnight</b>	11 <b>2.1: Increasing, Decreasing, and Piecewise Functions</b>	12 <b>2.2: The Algebra of Functions</b>	13	14
15	16 <b>2.3: The Composition of Functions</b>	17 <b>2.4: Symmetry</b>	18 <b>2.5: Transformations</b>	19 <b>2.6: Variations and Applications</b>	20	21
22	23 <b>Review for Chapter 2 Homework Test</b>	24 <b>Chapter 2 Homework Test due at Midnight</b>	25 <b>3.1: The Complex Numbers</b>	26 <b>3.2: Quadratic Equation, Functions, Zeros, and Models</b>	27	28
29	30 <b>3.3: Analyzing Graphs of Quadratic Functions</b>					



October 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 3.4: Solving Rational and Radical Equations	2 3.5: Solving Equations and Inequalities with Absolute Value	3 Review for Chapter 3 Homework Test	4	5
6	7 Chapter 3 Homework Test due at Midnight	8 Review for Mid-Term Exam	9 Review for Mid-Term Exam	10 Review for Mid-Term Exam	11	12
13	14 	15 Mid-Term Exam Window	16 Mid-Term Exam Window	17 Mid-Term Exam due by 5:00 CST	18 Midterm Grades Due	19
20	21	22	23	24	25	26
27	28 4.1: Polynomial Functions and Modeling	29 4.2: Graphing Polynomial Functions	30 4.3: Polynomial Division	31 4.4: Theorems about Zeros of Polynomial Functions		

November 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 4.5: Rational Functions	5 4.6: Polynomial and Rational Inequalities	6 Review for Chapter 4 Test	7 Chapter 4 Homework Test due at Midnight	8	9
10	11 	12 5.1: Inverse Functions	13 5.2: Exponential Functions and Graphs	14 5.3: Logarithmic Functions and Graphs	15 Last day to drop classes or withdraw from school	16
17	18 5.4: Properties of Logarithmic Functions	19 5.5: Solving Exponential and Logarithmic Equations	20 5.6: Applications and Models	21 Study for Chapter 5 Homework Test	22	23
24	25 Chapter 5 Homework Test due at Midnight	26	27	28 	29	30

December 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 <b>6.1: Systems of Equations in Two Variables</b>	3 <b>6.2: Systems of Equations in Three Variables</b>	4 <b>6.3: Matrices and Systems of Equations</b>	5 <b>6.4: Matrix Operations</b>	6	7
8	9 <b>6.5: Inverse of Matrices</b>	10 <b>6.6: Determinants and Cramer's Rule</b>	11 <b>6.7: Systems of Inequalities and Linear Programming</b>	12 <b>Chapter 6 Homework Test</b>	13	14
15	16 <b>Final Exam Window</b>	17 <b>Final Exam Window</b>	18 <b>Final Exam Window</b>	19 <b>Final Exam due at Midnight</b>	20	21
22	23	24	25  from The Very Hungry Caterpillar	26	27	28
29	30	31				