

MATH 103 College Algebra

ONLINE

Course Title and Number, Credits: MATH 103 College Algebra, 4 credits

Prerequisite: MATH 102 Intermediate Algebra, designated math placement test score, or instructor approval.

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

Course Objectives: Students will learn techniques for solving problems related to the topics above. Students will develop ideas and methods for applying techniques to find solutions or resolutions to questions requiring algebraic reasoning. A graphing calculator will be used in appropriate areas.

Instructor: Jan Nahinurk

Office: Thatcher 1104

Phone: 701-228-5479

E-mail: Use online course eMail tool; if unable to access the online class, use campus email address - jan.nahinurk@dakotacollege.edu

Office Hours: Use the eMail tool within the online course to communicate with the instructor. Course eMail messages will be checked daily, Monday through Friday.

Technical Problems: If you have a technical problem, contact the Distance Education office by calling 1-701-228-5479 or 1-888-918-5623 (toll-free) or the Wimba/Moodle help desk: 1-866-940-0065

Class Schedule: Online

Learning Environment: The course utilizes an online learning system called ALEKS. Through ALEKS, students will have access to worked out explanations, textbook lessons, and video demonstrations.

Required Text: *College Algebra e-Text 2nd Edition* by John W. Coburn with ALEKS access code; McGraw Hill Publishing

Graphing Calculator: preferably TI-83 or TI-84 series

Course Requirements:

The sequential nature of mathematics deems it necessary for students to participate in class on a regular basis. *Active participation in the course is paramount.* Active

participation means regularly accessing the online learning environment (ALEKS), mastering module topics, and taking the weekly progress checks.

Learning Mode: Students will work in the MyPie area of the ALEKS learning system on topics to be mastered. The problems for each topic are linked to worked out explanations, e-textbook material, and video demonstrations. Work on MyPie topics constitutes 10% of the student's final grade and is calculated by the percent of topics mastered by "module due dates." There are 12 modules in the course.

Homework Assignments: There are 14 homework assignments located in ALEKS. These assignments can be done multiple times and the best scores will be used. This work constitutes 45% of the student's final grade.

Tests: Two *proctored* tests will be given: the midterm and final exams. These exams are comprehensive and constitute 45% of the student's final grade. Students are responsible for finding a suitable proctor. Proctors must be approved by the instructor. The process is found on the homepage of this course.

Outline of Course Content:

- Review of Basic Concepts and Skills
- Equations and Inequalities
- Relations, Functions, and Graphs
- Polynomial and Rational Functions
- Exponential and Logarithmic Functions
- Systems of Equations and Inequalities

Schedule:

| Dates Covered | MyPie Modules |
|----------------------|--------------------------|
| 08/20/12 - 08/28/12 | Module 1: R.1-4 |
| 12/04/09 - 12/29/08 | Module 2: R.5-6 |
| 09/05/12 - 09/11/12 | Module 3: s1.1-1.4 |
| 09/12/12 - 09/18/12 | Module 4: s 1.5-1.6 |
| 09/19/12 - 09/25/12 | Module 5: s2.1-2.3 |
| 09/26/12 - 10/02/12 | Module 6: s2.4-2.5 |
| 10/03/12 - 10/16/12 | Module 7: s2.6-2.8 |
| 10/17/12 - 10/23/12 | Module 8: s3.1-3.2 |
| 10/24/12 - 10/30/12 | Module 9: s3.3-3.6 |
| 10/31/12 - 11/06/12 | Module 10: s4.1-4.3 |
| 11/07/12 - 11/13/12 | Module 11: s4.4-4.5 |
| 11/14/12 - 11/27/12 | Module 12: s5.1, 5.3-5.4 |

Class Policies:

- Regular participation is expected.

- Learning activities and progress checks will occur in the ALEKS learning system and require Internet connectivity.
- Module topics are to be mastered by due dates posted on ALEKS course calendar. Students may work ahead.
- Homework is due weekly and must be submitted on or before the 11:59 PM CT on the designated dates.
- Students must find a test proctor and have the selection of the proctor approved by the instructor at least 2 weeks before the midterm exam.
- Students must take the midterm and final exams in a proctored setting on the designated dates.
- Tests will be available for a limited period of time. The maximum time for the midterm is 1 hour and the maximum time for the final exam is 2 hours.
- During the midterm and final exams, students are not allowed to use books, notes, Internet resources, or other assistance.

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
 - Skill1: Solves equations and problems using the appropriate method
- Objective 2: Applies practical application of mathematics to everyday life
 - Skill3: 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.

Evaluation:

Final grades are based on mastery of MyPie topics (10%), scores on homework (45%), and scores on comprehensive midterm and final exams (45%).

Grades are calculated using the scale below.

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

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.

To learn how to avoid plagiarism in your work, review the website from Purdue University, [Is It Plagiarism Yet?](#)

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.