

Northern Michigan University
Mathematics & Computer Science Department
Intermediate Algebra (4 credits)
MA100-01 (10328) MTWRF 9:00 – 9:50am JXJ 3309

Instructor: Dr. Carol Bell

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Office Hours: MWTF 10:00 – 12:00, or by appointment

Prerequisite

MA090 (passed with a C- or better) or satisfactory score on the Mathematics Placement Exam.

Course Description:

The study of polynomials, graphing, algebraic fractions, radicals, lines and linear equations and inequalities, quadratic and exponential equations and systems of equations. Applications are emphasized.

Course Goals and Purpose: This course aims to help students build a secure foundation in algebra skills through meaningful contextual problems and situations and to develop skills that will help students succeed in a college level math class.

Text and Other Requirements:

- Required: Aleks 360 access code, 18 weeks Higher Education, ebook included (ISBN 9780077564018)
- Optional: Beginning and Intermediate Algebra, 4e, Miller, O'Neill, Hyde (ISBN 9781256666605)
- A scientific calculator may be useful to aid in working some of the problems.

MATHEMATICS TUTORING

All students are encouraged to meet with the TA during his/her scheduled office hours to receive help outside of class. The Mathematics Tutoring Lab is located in West Science 3810. The hours that tutors are available is posted outside of WS 3810. Please take advantage of getting additional help in the tutoring lab when you are not able to attend the instructor's scheduled office hours.

Student Learning Outcomes for Intermediate Algebra:

POLYNOMIALS AND FACTORING

Perform operations and factor polynomial expressions

Factor sum and difference of cubes

Factor quadratic equations when leading coefficient is not 1

RATIONAL AND RADICAL EXPRESSIONS AND EQUATIONS

Evaluate, perform operations and simplify rational expressions

Evaluate, perform operations and simplify radical expressions

Solve equations with rational expressions

Solve radical equations

Apply complex numbers

LINEAR EQUATIONS AND INEQUALITIES

Apply concepts of sets (unions, intersections, interval notation, set notation, Venn diagrams)

Solve and graph linear absolute value equations

Solve systems of linear equations
Solve and graph linear inequalities

QUADRATIC EQUATIONS AND FUNCTIONS

Solve quadratic equations by factoring
Solve quadratic equations by completing the square
Solve quadratic equations by quadratic formula
Solve quadratic equations by square root method
Graph and interpret quadratic functions
Graph and interpret linear functions
Graph and interpret square root functions
Graph and interpret absolute value functions

APPLICATIONS

Solve applied problems. To include, but not limited to; joint and combined variation, quadratic applications, basic geometry and basic exponential problems.

Learning outcomes will be assessed using assignments, quizzes, and exams.

Assessment Format: Specific information on each assessment is provided below.

- **Homework (20%):** Homework is completed in Aleks. You should keep a homework journal of your written work so that you can ask questions on the problems you do not understand. Be sure write down the question along with all your work done in completing the problem.
- **Quizzes (20%):** Quizzes on the homework will be given regularly. You may use your homework journal as an aid when completing the quizzes.
- **Hour Exams (30%):** Each hour exam will consist of questions from the material discussed in class. A university-approved excuse is generally a prerequisite for rescheduling any exam. *Make-up exams are not given.* If you miss an exam, half of your raw score on the final exam will replace the missed exam. Additional exams missed will receive a score of 0.
- **Final Exam (30%):** The final exam is cumulative and is scheduled for **Monday, April 25, 8:00-9:50am.**

The instructor reserves the right to reduce a student's grade due to an excessive number of absences or to give the student a failing grade in the course. Students may withdraw from the course prior to the University's class withdrawal deadline.

Grading Scale (%): Your course grade will be weighted according to the percentages outlined under Assessment Format. Corresponding grades based on a percentage are listed below.

100 – 95.0: A	86.4 – 82.5: B	76.4 – 72.5: C	66.4 – 62.5: D
94.9 – 89.5: A-	82.4 – 79.5: B-	72.4 – 69.5: C-	62.4 – 59.5: D-
89.4 – 86.5: B+	79.4 – 76.5: C+	69.4 – 66.5: D+	59.4 – 0: F

NMU's Non-Discrimination Statement:

Northern Michigan University does not unlawfully discriminate on the basis of race, color, religion, sex, national origin, age, height, weight, marital status, familial status, handicap/disability, sexual orientation, or veteran status in employment or the provision of

services, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities.

Anyone having civil rights inquiries may contact the Equal Opportunity Office, 502 Cohodas Hall, telephone number 906-227-2420.

ADA Statement:

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office by: coming into the office at 2001 C. B. Hedgcock; calling 227-1700; or e-mailing disserv@nmu.edu. Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.

Important Deadlines:

- Last day to drop with 100% refund (No grade): Monday, January 11, 5:00pm
- Last day to drop with "W" grade: Friday, March 25