

Syllabus: Intermediate Algebra, Course: MA100-06, 4 Credits

Term: Fall 2024

Professor: Dr. Amy E. Barnsley

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Office Hours: Tues and Thursday 12pm - 2pm, Jamrich 2210. Other times available upon request.

Required Supplies: Aleks 360, 18 weeks Higher Education, ebook included, Course Code QHTYM-YH3WP

Websites for this class:

- Educat: educat.nmu.edu Course documents, gradebook, discussion forum, quizzes
- Aleks: www.aleks.com Access through educat. Homework exams, ebook
- Instructor website: <http://www.amybarnsleymath.com> Math videos

Course Description and Learning Outcomes

MA100 Intermediate Algebra: The study of rational, radical, and quadratic expressions, equations, and functions, including graphing basic functions, domain and range. Emphasis on quadratic functions and an introduction to exponential and logarithmic functions.

Exam 1

Ch 4: Systems of Linear Equations

- Solve systems of linear equations, focusing on applications
- Solve applied problems such as those using systems of linear equations.

Ch 6: Factoring

- Factor polynomials, including ac-method, sum and difference of cubes
- Solve equations using the zero product property

Exam 2

Ch 5: Polynomials

- Perform operations on polynomials, including long division

Ch 7: Rational Expressions and Equations

- Evaluate, perform operations and simplify rational expressions
- Solve equations with rational expressions

Ch 8: Relations and Functions

- Graph and interpret basic functions to include linear, quadratic, cubic, absolute value, square root function. Include domain and range in interval notation.
- Translate basic graphs
- Perform operations on and compose functions
- Solve applied problems such as those using problems of variation.

Exam 3

Ch 9: More Equations and Inequalities

- Solve and graph linear absolute value equations
- Solve inequalities. Include compound, polynomial, rational and absolute value
- Graph linear inequalities in two dimensions

Ch 10: Radicals and Complex Numbers

- Evaluate, perform operations, and simplify radical expressions

- Solve equations with radical expressions. Include complex and extraneous solutions
- Solve applied problems such as those using radical equations.

Exam 4

Ch 11: Quadratic Equations and Functions

- Graph and interpret basic functions to include quadratic. Include domain and range in interval notation.
- Translate basic graphs
- Solve quadratic equations by square root method, completing the square, and quadratic formula. Include complex solutions.
- Solve applied problems such as those using quadratic equations.

Ch 12: Exponential and Logarithmic Functions

- Graph and interpret basic functions to exponential and logarithmic. Include domain and range in interval notation.
- Solve applied problems such as those basic exponential problems
- Use properties of logarithms to simplify expressions and solve equations

Prerequisites: C- grade or better in OC090 or satisfactory score on math placement exam.

Technical skills: Students must be able to navigate websites including Educat, Aleks and the instructor's website. They must use and check their @nmu.edu email daily. They must know how to use a scanner to scan a multiple page document into one PDF and post this document into Educat. CamScanner is an app for smartphones.

Technology requirements: Computer with internet access, access to scanner or scanner app such as CamScanner, scientific calculator. Does not have to be a graphing calculator.

Grades: Grades are based on the following scale

90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

Reading Quizzes	5%
Aleks Homework	10%
Group Quizzes	10%
Exams	45%
Final Exam	30%
Extra Credit Aleks Pie	5%

Your grade has the following components:

Educat reading quizzes: Short quizzes covering the sections in the book. There is one quiz for every lesson. They are due daily. The ebook is available in aleks. Link to ebook is in educat.

Aleks Homework: Homework is done in Aleks (link in Educat). You have unlimited attempts until the due date and time. The Aleks program will not allow you to work beyond the due date and time. Course code QHTYM-YH3WP

Group Quizzes: Done paper and pencil in groups of two or three. 50% of your grade is evidence of group work and 50% of your grade earned doing the problems. This will be scanned and uploaded.

Exams: Exams in-person or with a proctor. If you do not live in Marquette please contact me to make arrangements. See calendar for scheduled exam days/ times. I have set times for exams, but other times are available. Contact me.

Final Exam: Wednesday, December 11, 4:00 - 5:50 pm. For written work you are graded not only on correctness, but also on clarity of work. If I can't read your writing, then a correct answer will not get you full credit. You must show all the steps. Just giving the answer will not earn full credit. Again, you must show all the work. Word problems can often be solve by just "thinking" about it. In this class you must use algebra and show all the work to earn credit.

Disability needs: If you have a need for disability-related accommodations or services, please inform the Coordinators of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1737 or disability@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. Here is the website for disability services: <http://www.nmu.edu/disabilityservices/node/1>

Academic Integrity: Students are expected to do their own work and follow the university academic honesty policy. This policy can be found in the student handbook. See link here: <http://www.nmu.edu/dso/studenthandbook>

Late work: Deadlines are meant to help you finish the class on time- they are not meant to penalize you. Homework is generally extended with no penalty by contacting the TA or instructor. Exams may be extended but you must contact the instructor ahead of time. Contact the instructor with questions.

Important dates:

Drop: Last day to drop a class with no course record is September 3, 5 pm. Drop procedure: <http://www.nmu.edu/records/adddropprocedure>

Withdrawals: Last day for course withdrawal is December 6, 5 pm. I will recommend withdrawal for any student earning below 50%. A W grade and an F grade have the same effect on your full time status. The difference is that an F grade hurts your GPA, but a W grade does not. It always benefits you to get a W, instead of an F. Withdrawal procedure: <http://www.nmu.edu/records/node/19>

For complete withdrawal deadlines and policies, see www.nmu.edu/registrar/node/19

Privacy Statement and Accessibility for www.aleks.com https://www.aleks.com/privacy_statement.

<https://www.aleks.com/highered/math/accessibility>

Privacy Statement and Accessibility for www.zoom.us <https://zoom.us/privacy>,
<https://zoom.us/accessibility>

Technical support with Aleks: <https://mhedu.force.com/aleks/s/>

There are many resources available to help you succeed in this class and as a student. Here are the links to many campus resources:

Student Handbook: <https://www.nmu.edu/dso/studenthandbook>

Health Center <http://webb.nmu.edu/HealthCenter/>

Online Student Services <http://www.nmu.edu/online/>

Computer Help Desk (IT) <http://it.nmu.edu/helpdesk>

Disability Services <http://www.nmu.edu/disabilityservices/home-page>

Veterans Services <http://www.nmu.edu/veterans/veteran-student-services>

Dean of Students <http://www.nmu.edu/dso/home-page>

Olson Library <http://library.nmu.edu/>

Counseling Center <http://www.nmu.edu/counselingandconsultation/home-page>

Writing Center <http://www.nmu.edu/writingcenter/home-page>

Financial Aid <http://www.nmu.edu/financialaid/home>

Everything else offered on this website: <http://www.nmu.edu/students>