

Syllabus

# Intermediate Algebra

Course: MA100, 4 Credits

Term: Winter 2021

Professor: Dr. Amy E. Barnsley

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Educat discussion forum: At the top of Educat there is a general discussion forum for any questions. I will answer questions posted there daily (not graded).

Office Hours: Zoom office hours Mon & Thur 11-1 pm. Link in Educat. Text or email me first and then I will meet you on zoom.

Required Supplies: Aleks 360 access code, 18 weeks Higher Education, ebook included

## Websites for this class:

Educat: [educat.nmu.edu](http://educat.nmu.edu) Course documents, gradebook, discussion forum, quizzes

Aleks: [www.aleks.com](http://www.aleks.com) 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

**Your grade has the following components:**

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

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 when students are logged into [www.aleks.com](http://www.aleks.com)

Aleks Homework: Homework is done in Aleks. 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.

\*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 are proctored via zoom but are in Aleks. You are required to scan and upload written work. 80% of your grade is the written work, and 20% of the grade is the grade earned in Aleks. There is a time limit once you start the exam. Exams taken late will lose 20% per day they are late.

Final Exam: By appointment on April 23, time TBD for online section and April 27, 10 am for the 10 am class. Online, but proctored by zoom.

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 steps. Just giving the answer will not earn full credit. Again, you must show all work. Word problems can often be solve by just "thinking" about it. In this class you must use algebra and show all work to earn credit.

Disability needs: If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1700). 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. Exams taken late will lose 20% per day they are late. Other late work may be accepted if there are extenuating circumstances. Contact the instructor with questions.

**Important dates:**

Drop: Last day to drop a class with no course record is January 26, 5 pm. Drop procedure: <http://www.nmu.edu/records/adddropprocedure>

Withdrawals: Last day for course withdrawal is March 26, 5 pm. I will recommend withdrawal for any student earning below 60%. 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](http://www.nmu.edu/registrar/node/19)

Extra Resources: Beginning & Intermediate algebra; Miller, J; O'Neill, M; Hyde, is on reserve in the library. It is at the front counter and is listed under Barnsley. The textbook is 2-hour reserve (students have to use it in the library).

Privacy Statement and Accessibility for [www.aleks.com](http://www.aleks.com)  
[https://www.aleks.com/privacy\\_statement](https://www.aleks.com/privacy_statement).

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

Privacy Statement and Accessibility for [www.zoom.us](http://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>