

## Syllabus Intermediate Algebra

**Course:** MA 100, 4 Credits , Section 55: eLearning

**Term:** Summer 2016

**Assistant Professor:** Dr. Amy E. Barnsley

**E-Mail:** [abarnsle@nmu.edu](mailto:abarnsle@nmu.edu). Expect no more than 24 hour response time, except on weekends.

**Cell Phone:** 907 460 4677

**Office Hours:** Zoom video conference: Mon 12-1pm (start 5/23), Wed 6-7pm (start 5/18). Other times by arrangement.

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

**Optional Textbook:** Beginning and Intermediate Algebra, 4e, Miller, O'Neill, Hyde. You can buy this for \$25 directly from the Aleks website. I will put a textbook on 2 hour reserve in the library.

Websites for this class:

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

Aleks: [www.aleks.com](http://www.aleks.com) Homework, computation quizzes, practice exams, exams, ebook

Instructor website: <http://www.amybarnsleymath.wordpress.com> Math content

**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.

### **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.

**Prerequisites:** Passing grade in MA 090 or satisfactory score on math placement exam.

**Technical skills:** Student 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. The library on campus has a great scanner.

**Technology requirements:** Computer with internet access, access to scanner, 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:

|                           |     |
|---------------------------|-----|
| In Class assignments      | 2%  |
| Educat Discussion Forums  | 3%  |
| Educat Reading Quizzes    | 5%  |
| Aleks Homework            | 5%  |
| Aleks Computation Quizzes | 10% |
| Practice Exams            | 5%  |
| Exams                     | 40% |
| Final Exam                | 30% |

In Class Assignments: There are a few in class assignments in the start here quiz and there may be more throughout the semester.

Educat discussion forum: There will be a weekly discussion forum in Educat. All discussion forum posts and email interactions should be polite and civil. Remember that the mathematical background varies from student to student. What may seem obvious to one student is not to another. Spelling and grammar will not be graded. Responses should stay on topic. If needed a new thread should be started. This is not a space for general complaining. See the document called Discussion Forum Guidelines.

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 or you bought the optional physical textbook.

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. Extensions are freely granted, send me an email.

Aleks Computation Quizzes: One attempt. The Aleks program will not allow you to work beyond the due date and time.

Practice Exams: Take in Aleks program (two attempts). These are longer than the exams (about double the length) Show work for every problem on your own paper. Number every problem, and keep your work tidy. Your written work must be scanned as one document and uploaded into Educat. Only upload the work from your best attempt. I will grade your practice exam and give feedback in Educat. If you would like more than two attempts just ask.

Exams: Paper and pencil exams, taken in person with me or with an approved proctor. For written work (Practice exams, exams, and final exams) 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.

Final exam: Paper and pencil exam, taken in person with me or with an approved proctor. You must earn at least 60% on the final exam to earn a passing grade in the class.

**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>

### **Important dates:**

**Drop:** Last day to drop a class with no course record is May 20, 4 pm. Drop procedure: <http://www.nmu.edu/records/adddropprocedure>

**Withdrawals:** Last day for course withdrawal is July 8, 4 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>