

Fall 2024
MA111: COLLEGE ALGEBRA FOR CALCULUS PREPARATION
Division II
Harden Hall 109
M,T,W,R 1:00-1:50

Instructor: Hunter Hannula

Instructor email: huhannul@nmu.edu

Extra help availability:

My Office: JXJ 2227

Mon/Wed: 2:00 - 3:00 PM

Tues/Thurs: 11:00 AM - 12:00 PM

Else by appointment

Prerequisites: MA 100 (C- or better) or satisfactory score on the Math Placement Exam.

NMU General Education Learning Outcomes for Quantitative Reasoning and Analysis

(QUAR): Students will demonstrate Critical thinking and interpretation of quantitative data leading to conclusions.

Course Learning Outcomes:

1. Perform operations with functions, including composition of functions, polynomial long division and synthetic division.
2. Solve equations, including degree 2 and higher polynomials, rational expressions, logarithmic functions (emphasis on the natural log), and exponential functions.
3. Graph and determine the domain and range of a function, including the inverse map or function. Demonstrate placement of vertical and horizontal asymptotes for rational, logarithmic, and exponential functions.
4. Solve applied problems involving the application of polynomial, rational, radical, exponential and logarithmic functions.
5. Solve systems of equations including linear and nonlinear systems, and solve linear systems using matrices (if time permits).

Course Description: This course involves the continued development of students' abilities to manipulate algebraic statements and solve problems. A study of functions, graphing, equation solving techniques, exponents and logarithms, and systems of equations. Topics, applications and pace are tailored for those students intending to take calculus.

Course Materials: *Preparation for Calculus, 1st Edition*. Author: Bruce Crauder. ISBN-13: 978-1-4641-8660-8. This is a First Day course, meaning you don't need to make an additional purchase for this textbook. You will have access to the eBook once you join my Achieve class. **A Scientific calculator is allowed, no graphing calculators are allowed.**

Assignments: Homework will be done online through Achieve. Assignments will be due at 11:59 each Sunday. Aim to spread out your weekly assignments, as they will be split up into multiple short problem sets. Assignments will be made available from the first day of the semester if you want to work ahead. A link to access the Achieve course will be available on EduCat, make sure your pop-up blocker is disabled and click the link to log in or sign up using your NMU email. I will also briefly demonstrate how to get connected on the first day.

Exam Schedule:

Exams will take place on Thursdays unless otherwise stated to accommodate for schedule changes and special circumstances. There are four unit exams, one every three weeks, and a cumulative final exam preceded by a week of review. Typical exams are about 2-4 pages long, though the final exam is longer with one section corresponding to each of the four units.

- Exam 1: Week 4, Feb 6
- Exam 2: Week 7, Feb 27
- Exam 3: Week 10, Mar 27
- Exam 4: Week 13, Apr 17

Course Grading:

Homework: 20%
Exams (5): 40%
 Exam 1: 10%
 Exam 2: 10%
 Exam 3: 10%
 Exam 4: 10%
Final Exam: 30%
Quizzes: 10%

Letter Grades:

| | | | |
|-------------|-------------|-------------|--|
| A 93-100% | A- 90-92.9% | | |
| B+ 87-89.9% | B 83-86.9% | B- 80-82.9% | |
| C+ 77-79.9% | C 73-76.9% | C- 70-72.9% | |
| D+ 67-69.9% | D 63-66.9% | D- 60-62.9% | |
| F below 60% | | | |

Drop deadlines of note:

Last Day to Add Without Signature: Thurs, Jan. 16 by 5 pm

Last Day to Drop and Receive a "W" Grade: Fri, April 25 by 5 pm

Suggestions: If something isn't making sense, talk it through with others! For smaller clarifications it's often best to discuss things with classmates, but if you need more directed guidance feel free to stop by my office during the scheduled open hours. Outside of my hours it may also be helpful to seek out different perspectives on course content, for which the University offers free tutoring at the Math Lab in Jamrich 2100, as well as All-Campus Tutoring in Harden Hall and the Woods. Math isn't always easy, and for many it isn't a primary focus day to day, but it can be very rewarding when given time and attention. Pay close attention to what you do and don't know, and work with focus and patience to improve your understanding of the unknowns. Finally, don't underestimate the physical component of learning, and make an effort to consistently write math in order to develop muscle memory and associations. Doing so will strengthen existing knowledge and provide new 'hooks' for the ideas you work with. If you are unable or prefer not to write, the same holds true for speaking, or any other physical process through which you express mathematical ideas. The goal is to work with as many parts of your awareness as possible, since not all facets of these topics rely on the same parts for comprehension and execution.

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 Coordinators of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (906-227-1737 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.*

Veterans Services Statement: *If you are a veteran and need assistance with your benefits or are experiencing complications with your education due to military service connected issues, contact the Veteran Resource Representative in 2101 Hedgcock (227-1402 or mrutledg@nmu.edu). The Veteran Resource Representative can advocate for you before the Veterans Administration and can also help you solve any veteran specific issues you may have.*

Religious and Spiritual Observance Statement:

Faculty, staff, and students practice a variety of religious and spiritual traditions, which enhance the diversity of our campus community. NMU acknowledges that scheduling conflicts between required academic activities and religious and spiritual obligations are inevitable. Additionally, we recognize that some religious and spiritual obligations extend for multiple days and/or start at sundown of one day and extend through sundown of another day. In the event of conflicts, I will make every effort to help students avoid any negative academic consequences of observing religious and spiritual obligations. Students should consider the implications of missing class due to religious and spiritual obligations and should take into consideration these impacts when making decisions regarding any other absences during the term.

When an exam, assignment, or class conflicts with a religious or spiritual obligation, students are responsible for notifying me in advance of the date(s). You are not exempt from meeting course requirements or completing assignments in a timely manner as determined

Final Disclaimer:

As the semester progresses, I reserve the right to alter or change the policies of the syllabus with notice in order to fit the needs of the classroom and the guidelines of Northern Michigan University.