



MATH 124E College Algebra
Fall 2026
Sections 1011, 1013

CLASS INFORMATION:

Course Section: 1011

Lecture Times: 0830-0920 MW
0830-0945 TR

Lecture Location: BEH-113

Online homework Course ID: Your online course is linked through WebCampus.

Course Section: 1013

Lecture Times: 1130-1220 MW
1130-1245 TR

Lecture Location: BEH-109

Online homework Course ID: Your online course is linked through WebCampus

INSTRUCTOR INFORMATION:

Name: Bob Ain

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Instructor Web Page: <http://ain.faculty.unlv.edu>

Office Hours: 1000-1100 MTWR, or by appointment

Department Phone: (702) 895-3567

Department Web Page: <http://www.unlv.edu/math>

COURSE DESCRIPTION:

Equations and inequalities, relations and functions, linear, quadratic, polynomial, exponential, and logarithm functions, systems of linear equations and inequalities, matrices, sequences and series, binomial theorem.

Note: This is a 5 credit course. 3 of 5 credits counts as MATH 124 and toward graduation; the 2 corequisite credits does not count toward the total needed for graduation. Duplicate credits cannot be earned in any two of Math 124/126/128.

COREQUISITES INCLUDE:

Polynomial and rational expressions, linear equations, linear absolute value inequalities and applications, exponents and radicals, quadratic equations, relations and their graphs, system of equations

PREREQUISITES for the COURSE:

Three years of high school mathematics, including one year of algebra.

COURSE MATERIALS:

Required Text: *College Algebra (custom 5th Edition)* by Beecher, Penna and Bittinger.

Required Account: Pearson MyLab and Mastering (online account for homework)

Suggested Calculator: A non-programmable, non-graphing scientific calculator is recommended

SPECIAL NOTE:

During full semesters (fall and spring), students enrolled in Math 120 through Math 182 are required to attend a mandatory presentation regarding the online evaluations, tutor clinic and other tutoring options offered. Your instructor will provide you with specific details.

EVALUATION AND GRADE ASSIGNMENT for COREQUISITE MATERIAL:

The Math 24B component of the course is to support you to be successful in Math 124E. The Math 24B grade is S/U meaning Satisfactory or Unsatisfactory. Your Math 24B grade will be based on your participation and performance on selected elements of the course.

- * A passing grade for this portion of the course will allow a student to enter into a “standard” MATH 124 course the following term, independent of the grade earned in MATH 124E.

EVALUATION AND GRADE ASSIGNMENT for MATH 124CX MATERIAL:

Weight	Item
10%	Online Homework (Integrated sign-up in WebCampus)
30%	Test One, Test Two, Test Three
24%	Textbook Homework, Classwork, Other Assignments
6%	Portfolio
30%	Comprehensive Final Examination

- * Your final exam will contain assessment questions common to all sections of this course.
- * Letter grades will be assigned according to the following scale:
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: ≤ 59 .

Extra credit will *not* be permitted on final grades, or the final examination.

TOPICAL OUTLINE:

Just In Time Chapter. Basic Concepts of Algebra
Chapter 1. Graphs, Functions and Models (Sections 1-6)
Chapter 2. More on Functions (Sections 1-5)
Chapter 3. Quadratic Functions and Equations; Inequalities (1-5)
Chapter 4. Polynomial Functions and Rational Functions (Sections 1-3, 6)
Chapter 5. Exponential Functions and Log Functions (Sections 1-6)
Chapter 6. Systems of Equations and Matrices (Sections 1-3)
Chapter 7. Conic Sections (Section 4)
Chapter 8. Sequences, Series and Combinatorics (Sections 1, 7)

LEARNING OUTCOMES:

In addition to the listed outcomes, we expect students to have mastered or continue to hone their expertise in algebraic manipulations. All assessment questions should be considered tests of the appropriate use of these (and prerequisite) algebraic skills. The included outcomes are only a subset of the objectives covered in the course.

Chapter 1

- Given the endpoints of a line segment, find the length of the segment and its midpoint
- Find the domain of a function including rational expressions, square roots, or their composition
- Graph a line given its equation (equation may or may not be in slope intercept form)
- Find the equation of a line given two points
- Find the equation of a line that is parallel [[or perpendicular]] to another through a given point
- Solve a linear inequality (problem may be algebraic only, or given in the context of an application problem)

Chapter 2

- Evaluate a piecewise function for given inputs
- Find the composition of two or more functions, along with its domain
- Identify a given function is even, odd or neither

Chapter 3

- Find the roots of a quadratic equation
- Solve equations that are (or easily become) quadratic in form
- Determine the characteristics of the graph of a quadratic (direction of opening, axis of symmetry, vertex, roots, y intercept) and use this information to graph
- Find the maximum or minimum values given a quadratic application problem
- Solve rational equations
- Solve radical equations
- Given a formula, solve for a specific variable
- Solve linear inequalities with absolute value

Chapter 4

- Determine what happens to a given polynomial as the independent variable tends to positive and/or negative infinity (a.k.a. end behavior)
- Use long or synthetic division to find the result of a polynomial divided by $x - c$
- Solve a polynomial inequality
- Solve a rational inequality

Chapter 5

- Find the inverse of a given function or relation
- Convert an exponential equation to its equivalent logarithmic form, or visa-versa
- Solve an exponential equation
- Solve a log equation
- Find half-life or doubling time given context of model
- Given equation, find half-life or doubling time

Chapter 6

- Solve a system of two [[or three]] linear equations with two [[or three]] unknowns
- Identify the solution(s) for an augmented matrix in row-echelon form

Chapter 7

- Solve a nonlinear system of equations

Chapter 8

- Write the terms of a recursive sequence given as a formula

COREQUISITE MATERIAL

- Identify, simplify and calculate using laws of exponents, order of operations
- Compute fluently with fractions, decimals, percentage, and integers
- Simplify and evaluate algebraic expressions
- Create and interpret graphs of various types, and identify the components of the Cartesian coordinate system
- Add, subtract, multiply and divide polynomials and rational expressions
- Factor polynomials
- Simplify and solve equations with radicals and rational exponents

SAMPLE PROBLEMS/TEST and FINAL EXAM HINTS:

Available on the instructor's webpage.

CALCULATOR/TECHNOLOGY:

Calculators are optional in this course, although some problems will require a calculator. A sophisticated (EXPENSIVE) calculator provides no significant advantage over a good scientific calculator. In any case, we won't be spending time mastering their use. The primary focus of this course is to be able to think well. It is your personal responsibility to make sure your technology use in class is on-task. You will need some device (laptop or tablet) to access your textbook in class, but it is imperative you maintain discipline and use it for academic purposes. I need you focused on the mission at hand; don't wander off.

ACADEMIC INTEGRITY:

Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <http://studentconduct.unlv.edu/misconduct/policy.html>. While the UNLV Department of Mathematical Sciences encourages students to collaborate with peers, there is a distinction between verbal collaboration and copying. Specifically – it is *not* acceptable to “divide” work, and it is *not* acceptable to use another persons' hard work (current or former student, teaching assistant, or tutor) as your own. Further, if you feel you are being misguided, it is *your* responsibility to report this to your instructor *before* testing, so they can correct the situation and give you proper clarification.

Academic dishonesty will *not* be tolerated; the College of Sciences emphasizes zero tolerance for academic dishonesty. All acts of academic dishonesty may result in: automatic zero on the assignment, F in the course, disciplinary review, revoking of degree, probation, expulsion, etc.

COURSE SCHEDULE:

The Assignment Summary is available at the instructor's webpage.

HOMEWORK:

Homework will be assigned and graded using Pearson MyLab and Mastering (online account). Signup for your online course is by way of WebCampus. Textbook homework assignments are listed on my website, and will be evaluated by homework quiz on review days prior to exams. Other homework will be assigned, always with adequate time between assignment and due date.

MAKE-UP POLICY:

Late work is not generally accepted; if it is, expect a points penalty. Make-up exams may or may not be given at the discretion of the instructor.

TESTING:

Testing (Test One, Test Two, Test Three, and the Final Exam) for this course will be in-class, using paper and pencil, no books, no notes. Quizzes may happen at any time, with or without prior notice.

TUTORING:

The Department of Mathematical Sciences and the Academic Success Center both support tutoring for this course. More details as they become available.

GUIDELINES FOR COURTESY AND RESPECT:

I would like to welcome all students into an environment that creates a sense of community pride, courtesy, and respect; we are here to work cooperatively and to learn together.

In order to create a smooth and harmonious learning community, please make every attempt to *come to all the class sessions*, to come to class *on time*, and to *stay* until the end of the meeting. There may be a time when you are unavoidably late for class. In that case, please come into the room quietly and choose a seat closest to the entrance. Once the class session has begun, please do not leave the room and then re-enter unless it is an emergency.

It is important that we are all able to stay focused on the class lecture/discussion. For this reason, only *one person at a time* in the class should be speaking. Side conversations are distracting for surrounding students and for the professor.

As you can see, simple norms of courtesy should be sufficient to have our class run in the best interests of all. Any student considered to be a distraction to the learning environment may be asked to leave the classroom at any time. Any student who is continually a distraction to the learning environment may be administratively dropped. Thank you in advance for your cooperation.

OTHER INSTRUCTOR POLICIES:

- 1. Read the book. Read actively, taking notes as you go.**
- 2. Do math every day.**
- 3. Practice to mastery.**

Bring your textbook to class every class period.

A positive attitude is expected in this course daily.

Have fun.

University Policies
Are available [here](#).

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