Syllabus

MATH 111- College Algebra

The mission of Friends University, a Christian University of Quaker heritage, is to equip students to honor God and serve others by integrating their intellectual, spiritual and professional lives.

Location/time: Online

Professor	
Text	Required:
Email	
Phone	

Prerequisite: Math 100 (Intermediate Algebra) with a grade of C or better, or equivalent.

Basic course policies required by math department The final exam is comprehensive and will cover material from the entire semester.

Catalog Course Description: Credit hours: 3. Covers solutions of equations, inequalities, and systems of equations; linear, quadratic, polynomial, rational, exponential, and logarithmic functions; roots of polynomials; and conic sections. (Credit will not be given if a "C" or better has been received in a higher numbered mathematics course.)

General Education Outcome Category: Quantitative problem solving: Students will be able to define a problem, analyze numerical information, apply mathematical principles, and integrate quantitative methods into problem solving.

General Education Competencies and Assessments: Assessed by Standardized University-Wide College Algebra Final Exam, Updated and Revised Each Year by Math Faculty Covering These Outcomes

(R) Representation (Outcomes 1, 16, 18, 19, 20, and 21. Final exam must assess at least four of these six outcomes.)
    Translate problem and represent solution in the appropriate mathematical form.
(M) Methodology (Outcomes 9, 22, 23, 24, 26, 27, 28, 29, 30, and 35. Final exam must assess at least six of these ten outcomes.)
    Identify suitable methods to solve problem.

(C) Computation (Outcomes 1, 2, 3, 4, 5, 8, 17, and 25. Final exam must assess at least five of these eight outcomes.)

Carry out correct calculations and/or logical steps to arrive at solution.

(I) Interpretation (Outcomes 6, 7, 10, 11, 12, 13, 14, 15, 31, 32, 33, and 34. Final exam must assess at least ten of these twelve outcomes.)

Present the solution in the context of the original problem and draw relevant conclusions.

Outcome Index

1. Utilize exponents and scientific notation (R).
2. Simplify expressions involving radicals and rational exponents (C).
3. Add, subtract, and multiply polynomials (C).
4. Factor polynomials (C).
5. Simplify, add, subtract, multiply, and divide rational expressions (C).
6. Solve and apply linear equations (I).
7. Solve and apply linear formulas (I).
8. Add, subtract, multiply, and divide complex numbers (C).
9. Solve and apply quadratic equations using any of the four methods for solving (M).
10. Solve polynomial equations by factoring (I).
11. Solve radical equations (I).
12. Solve equations with rational exponents (I).
13. Solve equations containing absolute values (I).
14. Solve linear inequalities (I).
15. Solve quadratic and rational inequalities (I).
16. Graph lines and understand the concept of slope (R).
17. Utilize the distance and midpoint formulas (C).
18. Graph circles (R).
19. Distinguish among relations, functions, and one-to-one functions (R).
20. Illustrate transformations of functions (R).
21. Find composite functions (R).
22. Construct and graph an inverse function (M).
23. Define and apply direct, inverse, joint, and combined variations (M).
24. Identify, graph, and apply polynomial functions (M).
25. Perform polynomial division and synthetic division (C).
26. Find the zeros of a polynomial function (M).
27. Identify, graph, and apply rational functions (M).
28. Identify, graph, and apply exponential functions (M).
29. Define logarithms and their products (M).
30. Identify, graph, and apply logarithmic functions (M).
31. Solve and apply exponential and logarithmic equations (I).
32. Solve and apply systems of linear equations in two variables (I).
33. Solve and apply systems of linear equations in three variables (I).

34. Solve systems of linear inequalities (I).
35. Apply linear programming (M).

Grading: 90-100% A, 80-89% B, 70-79% C, 60-69% D, < 60% F.

Homework	25%
Tests	50% (your highest test score will be weighted double to help you!)
Final Exam	25%
Total	100%

Other grading considerations: Late work may not be accepted. Behavior, attendance (for online classes this is measured by consistent online participation throughout each week), and the quality of work are important and will be taken into consideration when final grades are assigned.

Attendance and absences: You are responsible for notifying the teacher once for each assignment missed, preferably by email prior to the missed assignment. Prior notification with a reasonable explanation is almost always required for extended deadlines; however, consideration may be given for exceptional circumstances.

Assignments: Homework and tests are assigned each week. You should reserve at least 1-2 hours of quality time with no distractions for at least 5-6 days per week to work on this course. The Carnegie credit hour unit = 3 hours minimum of student learning time and/or work per week for 16 weeks per credit hour (6 hours per week per credit hour for 8 weeks). For either a 16- or an 8-week course, this equates to 48 minimum hours per credit hour. This course is three credit hours, so on average students across the nation should expect to spend about 144 hours of time to effectively complete a college algebra course.

Instructor's note: You can do it! We can break that down into a doable daily amount: eight weeks * 7 days/week = 56 days, resulting in a Carnegie equivalent of 2.57 hours per day. This sounds like a lot! It is, but I will do all I can to help you! With my help in carefully helping you learn through structured assignments and helpful examples that I have prepared and chosen for you, you might be able to learn 144 hours' worth of knowledge even more efficiently than normal. I will do my very best to design this course in the very best way so that you can learn as readily as possible for your very best success!!

The most important yet simple secrets for success are to be faithful in working hard every day, and to seek for help when you need it! I will be here for you!

Standardized Final Exam:

Assistance: The Academic Resource Center (295-5204) is available free of charge for students who desire math help. Click on the link in the previous sentence to view their

hours. The ARC is located in the back of the library at the main Wichita campus. In addition to CRLA-certified tutoring which is available any time the tutoring center is open, I will be available daily by email to help you!

Academic honesty: (A) A standard of honesty, fairly applied to all students, is essential to a learning environment. Students abridging a standard of honesty must accept the consequences; penalties are assessed by appropriate classroom instructors or other designated people. (B) At the discretion of the instructor, students may be given a grade of zero for suspicious work or assigned similar material and given the lower of the two grades. If evidence of academic dishonesty is discovered, the instructor reserves the right to report the incident to university officials. (C) If a student is found responsible, "sanctions could include a failing grade for the course, a notation on the transcript, suspension or expulsion from the University, or any combination of these sanctions" (Friends University Catalog). Please read the [Friends University Academic Honor Code Policy](#) which governs your participation in this class.

Special needs, ADA: It is the responsibility of the student to bring to the University's attention the need for accommodation due to a qualifying disability. (Friends University Catalog). If you have a physical, perceptual, psychiatric/emotional, medical, or learning disability that may impact your ability to carry out assigned course work, contact Steven Harcus, Director ADA Services. (Email: steven_harcus@friends.edu or Voice 316-295-5522 or 800-794-6945 x5522). We will review your concerns, confirm your disability, and determine, with you, what accommodations are necessary. All information and documentation of your disability is confidential and will not be released by disability services without your written permission.

COVID-19 University Precautions: In order to promote the safety of all members of our community during the COVID-19 pandemic:

- If a student is sick and thinks they have COVID-19, the student needs to stay home until they have gone three days with no fever or other COVID-19 symptoms and ten days since symptoms first appeared.
- If a student tests positive for COVID-19 but does not have symptoms, the student needs to stay home until 10 days have passed since the positive test.

Students who need to miss face-to-face classes should contact their instructors immediately to arrange an SEL or online option in order to continue to participate in class.

Notice: This information is subject to additions or changes.