

MAT 111: College Algebra– Spring 2009 Syllabus

Mission Statement: Union’s mathematics program seeks to further students in their quest for increased understanding of Creation and the created order and to equip students to serve God, church, and society through excellence in thinking and the use of mathematics. We do this through a curriculum that develops the student’s ability to think logically, analytically, and abstractly; to pursue a body of knowledge whose basis is largely independent of both empirical observation and culture; and to learn humility and a sense of wonder at the complexity, beauty, and applicability of mathematics.

I. Basic Information

MAT 111: College Algebra, Three (3) credit hours.

Time: 9:00-9:50 MWF

Prerequisites: Two years of high school algebra or its equivalent.

II. Course Instructor

Instructor: Dr. Matt Lunsford

Office: C – 47

Office Hours: TBA

Office Phone: 661- 5222

email: mlunsfor@uu.edu

III. Course Description and Objectives

This course is designed to familiarize the student with such fundamental mathematical concepts as polynomials, linear and quadratic equations, exponential and logarithmic functions, basic analytic geometry, and various methods (i.e. Gauss-Jordan elimination and Cramer's Rule) for solving linear systems of equations. Upon successful completion of the course, the student will be able to apply various problem solving strategies to find solutions to a variety of real-life problems. Furthermore, the student will have acquired the necessary algebraic skills to continue pursuing higher levels of mathematics.

IV. Method of Instruction

This course will be taught by using a lecture-demonstration-discussion method.

V. Required Text

Essentials of College Algebra - (Alternate Edition) by Lial, Hornsby, and Schneider
(0-321-49185-8)

A graphing calculator is highly recommended. A scientific calculator is required.

VI. Assigned Readings and Research

The student will be required to read selected parts of the above text.

VII. Special Projects and/or Activities

Problem solving assignments from the text will be made throughout the course. Students are expected to complete these assignments in a timely fashion. Quizzes based upon these assignments will be given in class. A grade of zero will be recorded for each student who is absent on the day a quiz is given. At the end of the semester, the student's two (2) lowest quiz grades will be dropped. There will be NO make-up quizzes.

VIII. Method of Evaluation

The student will be evaluated by his/her performance on three unit exams and on a final comprehensive exam. The final exam will be worth 125 points and will be given according to the university's final exam schedule. Each unit exam will be worth 100 points. Additional points will be accumulated through quizzes. The student's final letter grade in the course will be determined by calculating the ratio of the total points earned to the total points possible and using the following grading scale: A 92 - 100; B 83 - 91; C 74 - 82; D 65 - 73; F 0 - 64

IX. Attendance Policy

Regular attendance is expected of all students (see VII.). Due to the nature of mathematics, regular attendance is necessary in order for the student to successfully complete the course. Any student who misses an excessive number of times will be reported to the Academic Center. Any student who misses an exam must bring to the instructor a written explanation of the reason for the absence and supporting documents within two days of the exam. A make-up exam will not be scheduled unless the above procedure is followed.

X. Cheating and Plagiarism

No forms of cheating will be tolerated. If the instructor observes cheating by a student during an exam, the student will receive a grade of zero for that exam and subsequently will be reported to the Office of the Provost.

XI. Drop Date

The last day to drop the course without special permission of the Registrar is March 10.

XII. Outline of the Course

- A. Review of Linear and Quadratic Equations / Real and Complex Numbers
- B. Relations and Functions, Graphs of Basic Functions, Graphing Techniques
- C. Function Operations, Composition of Functions, and Inverse Functions
- D. Exponential and Logarithmic Functions and Equations
- E. Systems of Equations and Inequalities, Gauss-Jordan method, Cramer's Rule

XIII. Miscellaneous

In class use of cell phones, PDAs, MP3 players, laptops, and other similar electronic equipment without prior instructor approval is strictly prohibited. Calculators **must** be standalone devices for the purpose of calculation only.