

Math 111

Algebra for Applications

Class Policies

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Office Hours: MWF 2:00 – 3:00

Spring 2005

MWF: 10:00 – 10:50, YR 204

Section: 010

Prerequisites: Two years of algebra or DVMT 110, and one year of plane geometry. This course is not open to students who have successfully completed either Math 115 or Math 119.

Catalog Description: Intended primarily for students in business, economics, psychology, and the social sciences. Applications of finite mathematics: linear equations, matrices, linear programming using the graphical methods and the simplex algorithms, sets and counting, elementary probability.

Learning Objectives:

1. The student shall understand lines and linear inequalities from both a graphical and an algebraic perspective.
2. The student shall understand the behavior of systems of linear equations, both graphically and algebraically, and shall be able to solve such systems.
3. The student shall understand the relationships between matrices and systems of linear equations, and shall know the relationship between elementary operations on matrices and the corresponding steps in the solution of systems of algebraic equations.
4. The student shall understand the basic arithmetic operations on matrices, shall understand the importance of the inverse of a matrix, and shall be able to calculate the inverse of a matrix, when it exists.
5. The student shall understand what a linear programming problem is, and shall be able to solve such problems graphically.
6. The student shall understand the simplex method for solving linear programming problems, and shall be able to use it to solve realistic problems.
7. The student shall understand the notion of a set, and shall understand the various methods for determining the number of elements in a set.
8. The student shall understand the basic concepts of probability.

Academic Integrity: The nature of higher mathematics requires that students adhere to accepted standards of academic integrity. Violations of academic integrity include cheating, plagiarism, falsification and fabrication, complicity in academic dishonesty, personal misrepresentation and proxy, bribes, favors and threats. Cheating is a serious offense that will have grave consequences for your academic life.

Students who violate these standards will either fail the course outright or, at the instructor's discretion, may merely receive a zero on any assignment for which the student receives inappropriate assistance. Particularly serious violations of these standards will be referred to the administration for possible additional action.

Instructional Material: The required text is *Finite Mathematics & Its Applications*, eighth edition, by Goldstein, Schneider, and Siegel.

Required Course Practices: Attendance is expected; you should only miss a class for a compelling reason. If you do miss a class, you are responsible for any material that you miss, including any homework assignments given in that class.

The only way to learn mathematics is by doing problems, problems, and more problems. Homework will be assigned on a regular basis, and will form a substantial portion of your final grade.

Guidelines for Homework:

- (1) Late homework will not be accepted without a compelling reason.
- (2) Assignments are required to be neat, clean, and paper-clipped or stapled.

- (3) Assignments must include the author's name, and a brief description of the assignment.
- (4) Students are allowed to discuss homework problems with their classmates, however all work that is turned in must be the student's own work.

Any assignment that does not meet these criteria may receive a deduction in score, or more generally will simply be rejected.

Expect to spend a substantial amount of time studying and working on homework. The general rule is two to three hours outside class for each hour inside; this translates to about 10 hours of homework and personal study per week.

Examinations shall be announced ahead of time; attendance is expected. Make-up exams shall only be given for compelling reasons; all excuses are subject to verification.

The Final Exam is scheduled for Tuesday, May 17 from 10:15 a.m.-12:15 p.m. The final exam will not be rescheduled. Attendance is expected; a make-up exam will not be given without an extremely compelling reason.

Methods of Evaluation: Attendance and class participation shall be evaluated. Homework shall be collected and graded on a recurring basis. Occasional, unannounced quizzes may be given; for scoring purposes they shall be considered to be a homework assignment. There shall be three midterm examinations, tentatively scheduled for February 23, March 18, and April 25. The Final Exam shall be comprehensive. Final grades shall be determined by the following method:

Homework: 25% Midterms: 40% Final Exam: 35%

Note the weight of the final.

Withdraw: The last day to withdraw from the course with a grade of "W" is April 6.

Help: If you have difficulty completing a homework assignment, do not hesitate to ask for help, either from your friends, or from me. You are welcome to stop by my office, for whatever reason, and at whatever time, even if there are no office hours scheduled then. If you wish, you may also simply send an e-mail message.

Web Page: My web page at <http://www.towson.edu/~moleary> has a page devoted to this course, which contains the syllabus, and copies of exams once they are given. Also archived on that site are copies of all of the old exams that I have given while at Towson.