

Syllabus for MATH 215, Sections 1
Finite Mathematics for Information Sciences
Summer 2012

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Office Hours: MTh 4:00–5:30, and by appointment

Course Description This course focuses on the area of mathematics of particular use in the information sciences. The basic linear algebra of matrices used for solutions of large scale systems of linear equations is treated. Applications of matrices such as Leontieff models of multi-sector economics and the basics of the simplex method for solving linear economic optimization problems are discussed. Fundamental concepts of probability including basic combinatorial methods for probabilistic computations are studied.

Prerequisites: MATH 141, 151, 155 or 380 or consent of department and/or instructor.

Text: *Finite Mathematics*, Waner/Costenoble, 5th Edition, ISBN 978-1-4390-4925-9.

Material to be Covered: We will try to cover chapters 2, 3, 4, 6, 7, 8.1, 8.2 and Linear Independence of Vectors at a rate of approximately $1\frac{1}{4}$ chapters per week.

Homework and Quizzes: Homework will be assigned on a regular schedule and will be due at the beginning of class on Thursdays. Late homework will not be accepted. There will be occasional, possibly unannounced, quizzes, during the semester. Missed quizzes may not be made up.

Exams: There will be two exams and a final. These exams are scheduled during class time and are indicated in the tentative course calendar. The final exam will be cumulative, but with an emphasis on the material covered since the second exam.

Final Exam: Thursday, August 16th, 6:00–8:05 pm, in SOND 101.

Grading:

Homework	10%
Quizzes	15%
Two Exams	40%
Final Exam	30%
Participation	5%

A	100 – 85%
B	84–75%
C	74–65%
D	64–55%
F	Less than 55%

There will be occasional extra credit points given during lectures. However, there will be no curving, i.e., your performance in the class will not be determined by your neighbour's. If it will help your grade, I will replace your lowest test grade with your grade on the final exam.

Working Together: It is ok to work together on homework. However, when it comes time for you to write up the solutions, I expect you to do this on your own, and it would be best for your own understanding if you put aside your notes from the discussions with your classmates and wrote up the solutions entirely from scratch. Working together on exams, of course, is expressly forbidden.

Calculator: Students may use a graphing calculator on exams and homework. Students may not use a machine with symbolic manipulation capabilities on exams. Thus, no TI-89's, TI-92's, HP-48's nor laptop computers may be used on exams.

Absences: You are expected to attend every class. If you are not able to turn in a homework assignment, take a quiz, or take an exam because of an absence, you will not be able to turn the homework in late or take the quiz or exam.

Expectations: I expect that everyone will maintain a classroom behaviour conducive to learning. I like an informal atmosphere, but it must be orderly. Thus, everyone is expected to behave with basic politeness, civility, and respect for others. In particular, talking in class is ok if it's part of a class discussion or with me. Private communications are not,

especially during quizzes and tests. Neither are reading extraneous materials, using electronic equipment, or sleeping.

UMBC Academic Integrity Policy By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behaviour are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, the UMBC Integrity webpage www.umbc.edu/integrity, or the Graduate School website www.umbc.edu/gradschool.

Tentative Schedule

Week of	Sections we will be covering (probably)
7/9	Algebra Review, Chapter 2, 3.1. Quiz 0 and 1 <i>Note: last day to drop without a "W" is July 12th</i>
7/16	3.2 – 3.5, 4.1, Quiz 2 and 3
7/23	4.2–4.4, Test 1
7/31	Chapter 6, 7.1, Quiz 4 and 5 <i>Last day to drop a course without a session withdrawal is August 3rd</i>
8/6	7.2 – 7.6, Test 2
8/13	8.1,8.2 and Linear Independence of vectors Review and <i>Final</i> .

Have a successful semester