

MA 110-2A, Finite Mathematics, Fall, 2006

Instructor: Dr. John C. Mayer
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Department of Mathematics: CH 452

Email: mayer@math.uab.edu
Office Hours: Tu 9:30 – 10:30 in MLL
 Th 9:30 – 10:30 in CH490A
 (other hours by appointment)

Phone: 934-2154

Website: <http://www.math.uab.edu/mayer/MA110Fall06.htm>

Teaching Assistants

Name	Office	MLL Hrs (CH 443)	Email
William Bond	none	Tu 10:30am-3:30pm + W 3-4pm	bond@math.uab.edu
Andrew McDonald	CH 457	M 10-11am + W 10am-12m	friezu@uab.edu
Katie Roberson	CH 475A	MW 12-1:30pm	kaek@uab.edu
Feng Li	CH 472	TuW 6:30-8pm	lifeng@uab.edu

Class Meetings: 8:00 – 9:15 AM, Volker Hall, Lecture Room A, Tuesday and Thursday, except UAB holidays. *Enter at rear. Be on time; class starts sharply at 8:00 AM.* Class ends promptly at 9:15 as there is a class after us.

ID Code Number: Each student will have an ID code number which will be issued the first day of classes. This number should be used instead of your name on all homework, quizzes, and tests, and will facilitate returning graded work to you. Please remember your code number.

Text: *Excursions in Modern Mathematics* (6th Edition) by Peter Tannenbaum, Pearson/Prentice-Hall, 2004. A *Student Solutions Manual* (odd problems) is available.

Material Covered

Chapter	Sections	Topics	Test Nbr	Test Date
1	1.1-1.6	Voting methods		
2	2.1-2.3	Weighted voting and Banzhaf power index	1	Sep. 19
3	3.1-3.3,3.6,3.7	Fair division methods		
4	4.1- 4.6	Apportionment methods; paradoxes	2	Oct. 17
15	15.1-15.6	Probability and counting		
13	13.1-13.6	Collecting data; random sampling	3	Nov. 16
14	14.1-14.4	Descriptive statistics		
16	16.1-16.5	Normal distributions	4	Dec. 14, 8:00 AM

Read ahead. By working steadily and regularly, you will increase your chances to succeed in this course.

Lecture Notes

It is highly recommended that you take notes in class. To assist you in note-taking, the duplicated lecture notes, *MA 110 Class Notes* are available in the UAB Bookstore. You can complete them, and take your own notes, as you follow the lecture. Updated PDF files of the class notes will be posted regularly to the course website:

<http://www.math.uab.edu/mayer/MA110Fall06.htm>

Classroom Policies

Politeness counts. Turn off all audible cell phones and pagers. Enter and leave by the rear doors. Do not sit in the last row of seats (unless you are late). If you are late for a class, come in quietly and take a seat immediately. If you are late for a quiz or test, you will be directed to a seat. Since other classes have use of the room, extended time cannot be granted if you arrive for a quiz or test late; you may elect to make a test up per the make-up policy below, rather than take it in a shortened time.

University policies regarding **academic honesty** will be rigorously enforced. There is absolutely no talking or moving about during tests or quizzes. Nothing is permitted on your desk except the test/quiz, pen/pencil, and calculator. Sit apart from others, if possible, on tests. While you may receive assistance on homework on the **type** of problem, all work turned in to be graded must be your own. Multiple versions of quizzes, tests, and homework will be used.

Handouts, and graded homework, quizzes, and tests will be available near the rear doors on the back row of desks either as you enter class, or as you leave class, in code number order.

Handouts and returned items will be made available just once in class. Subsequently, handouts, and homework assignments, as well as quiz and test answers, will be posted to the far right of CH 452 (Mathematics Office) after class.

Calculator (Bring it!)

You are required to have a calculator and you must bring it to all class meetings. It will be needed on tests and quizzes. You may not share a calculator with another student, even if you forget yours. ***You may not use a cell phone as a calculator.*** Your calculator must be able to perform the operations of addition, subtraction, multiplication, division, factorial (look for a $x!$ key), square roots, and exponentiation (look for a x^y key). For example, it must be able to evaluate $8!$, 500^{1-1} , and $\sqrt{68}$. It should have a memory function. It may have statistical functions. Trigonometric functions (sin, cos, etc.) are not required. You must be able to handle percents, decimal fractions, ordinary fractions, and your calculator's notation for large and small numbers (scientific notation). You should be able to round-off or truncate decimal output appropriately to the problem. Calculator help sessions will be scheduled in the Mathematics Learning Lab (MLL - CH 445) early in the semester.

Test and Quiz Schedule

There will be 4 major tests (see schedule above) and 8-10 short quizzes. Tests will be timed at about 60 minutes (including Test 4 given within the first hour of the final exam period). Quizzes are timed at about 15 minutes. Quizzes will be given with no prior notice. Tests and quizzes must be turned in at the end of the period, promptly, as there is a class directly after us in the room. Have a picture ID with you on test dates.

Attendance (and relation to quizzes)

Attending class is required and is part of your grade. The quizzes will serve the purpose of spot-checking attendance. Quizzes are unannounced. Quizzes cannot be made up, no matter what the excuse. It is in this way that attendance becomes part of your grade. A quiz will have 3 to 5 questions and be graded on a 10-point scale. However, an incorrect answer only deducts 2 points. So, for example, on a 3-question quiz, you will get 4 points just for being there.

Remember: expect a quiz any day and be prepared.

Homework (and preparation for class)

Homework problems will be assigned at the end of each class meeting for practice on the topics covered in class. You are expected to do the homework prior to the next class meeting (excluding test days). Most homework will not be collected. However, during the semester, there will be four major homework assignments, intended for test review, which will be collected. These will be graded and returned before the relevant test.

	Date due	Date returned	Test date
Homework 1	Sep. 12	Sep. 14	Sep. 19
Homework 2	Oct. 10	Oct. 12	Oct. 17
Homework 3	Nov. 9	Nov. 14	Nov. 16
Homework 4	Dec. 5	Dec. 7	Dec. 14, 8:00 AM

Read the textbook before the material is covered in class; stay at least one meeting ahead in reading. Doing the homework and the reading ahead is the best way to prepare for class and for the quizzes. Mastering the homework is the best way to prepare for the tests.

Grading

Homework average will count 10-20%. Quiz average, with lowest two or three scores dropped (depends on how many quizzes are given), will count 10-20%. Test average (no drops) will count 60-70%. The precise grading policy will be determined by a class vote from among four candidates using a preference ballot:

- A. Homework 20%, Quizzes 20%, Tests 60%
- B. Homework 10%, Quizzes 20%, Tests 70%
- C. Homework 20%, Quizzes 10%, Tests 70%
- D. Homework 15%, Quizzes 15%, Tests 70%

Voting method: Borda count, ties broken first by top-down comparison, and if still unbroken, by lot. The outcome of the vote is binding upon all class members.

Note that quizzes will typically be a bit easier than tests.

Make-Up

There are absolutely no make-up quizzes. Homework not turned in by the due date is late. Late homework loses 20% in value each class meeting it is late without an acceptable excuse. If a student misses a test, with an acceptable excuse, the instructor will require a make-up test to substitute for the missed test. Make-up tests will be given during the second half of the final exam period. No extra time is allowed for making up more than one missed test.

Withdrawal

Withdrawal from the course is entirely the responsibility of the student. You must turn in the appropriate form to the Registrar's office. You cannot withdraw just by ceasing to attend class. UAB permits withdrawal with a "W" up to and including October 23, 2006. After that date you will receive a grade (A-F) for the course. You will have the results of two tests before the withdrawal date.

Remember: quizzes cannot be made up, no matter what the excuse.

Sources of Assistance

In addition to the office hours of your instructor and his assistants, the following sources of extra help are available to you. A separate handout describing them will be given to you. You are encouraged to participate in these voluntary activities. Participation may improve your grade, but participation is entirely voluntary and is not itself graded.

1. Mathematics Learning Lab (MLL) in CH 443.
 - a. Course assistants will hold office hours in the MLL.
 - b. There is an MA 110 help desk in CH 443.
 - c. Go to the MLL for tutorial and small group assistance on specific problems and problem types.
 - d. Go to the MLL for calculator help sessions.
2. Pre-test review sessions.
 - a. Provided by course assistants.
 - b. Go for review of topics/problems typically encountered on major tests.
 - c. Classroom to be announced.

Remember, being a full-time student is a full-time job.