

Fall 2007 MTH U115 MATHEMATICAL THINKING  
COURSE POLICIES & SYLLABUS

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Office Hours: Monday, Wednesday, and Thursday from 10:30 to 11:35 AM and by Appointment

**General course objective:** This course focuses on the development of mathematical thinking and its use in a variety of contexts to translate real-world problems into mathematical form and, through analysis, to obtain new information and reach conclusions about the original problems.

### GETTING STARTED

- **Get the Required Text:** *Finite Mathematics with Applications* by Lial, Hungerford & Holcomb, Custom Edition (the code for the online homework, MyMathLab, is included).
- **Get a Class Packet:** Pick up a class packet for MTH U115 at Gnomon Copy, 325 Huntington Ave.
- **Register for the Online Exercises:** Use the access code that comes with your copy of the text and the course id, **porter95725**, to register for the online exercises for our section of the course. Weekly assignments and other information about the course will also be available on this website.
- **Get a Calculator:** A calculator to perform matrix operations is required, preferably a TI-83. Cell phones are not allowed during quizzes or tests. There is no sharing of calculators during quizzes or tests.

### COURSE POLICIES:

1. Northeastern University is committed to the principles of intellectual honesty and integrity. All members of the Northeastern community are expected to maintain complete honesty in all academic work, presenting only that which is their own work in tests and assignments.
2. There will be periodic quizzes to keep students up to date on the material. The best 5 quizzes will be used to determine your quiz average. **If you miss a quiz, for any reason, there is no make-up.** If the absence is due to a university supported absence (i.e. jury duty, military duty, extended hospitalization, a university supported activity for which you must miss class, a scheduled game in which an athlete is participating or a religious holiday), then the following quiz will count twice to replace the missing grade. NOTE: This does NOT apply if you miss class due to the flu, a wedding, work, etc. We understand that students may have a valid reason to miss class. This is why we only count the best 5 quizzes to calculate your average.
3. **There will be a one-hour midterm and a two-hour, cumulative, departmental final exam. No student will be granted a request for a special final exam unless it is due to a registrar created conflict. If you miss either of these exams, for any reason other than a university sanctioned absence (see #2), you will receive a grade of zero, as there will be no make-up exams given. Our final exam is scheduled for Monday, December 10, at 10:30 AM. A plane ticket home will not excuse you from this exam, so please plan accordingly.**
4. September 19 is the last day to file a final exam conflict form with the Registrar. The final exam schedule is posted. Please check that you do not have two exams scheduled at the same time or three exams scheduled for one day.

5. Homework will be assigned regularly. You can earn an additional quiz grade by completing the majority of exercises in each of the online assignments, in which case your additional quiz grade is your average for the online exercises. Additional problems will also be assigned from the book.
6. To help you in your learning of the course material there will be in-class Practice Problems which can add up to 2 points to your final average.
7. There is no “extra credit work” or “special project” available to make-up for poor grades at the end of the semester.
8. It is the student’s responsibility to be aware of what happens in the classroom, including announcements of possible exam (or quiz) date changes, material that will be covered and changes to the syllabus, which may occur. If classes are cancelled for any reason, scheduled quizzes or exams will be given the following class. Announcements will also be posted on the class page of [www.coursecompass.com](http://www.coursecompass.com).
9. Your final average in the course will be determined as follows:  
 Quizzes: 35%, Midterm 25%, and Final Exam: 40% plus up to 2 additional points for your work on the Practice Problems.  
**THERE IS NO SCALING OF QUIZ OR EXAM GRADES IN THIS COURSE.**  
 You will be graded to the following scale:

Final Avg	Grade
96 - 100	A
92 - 95	A–
89 - 91	B+
86 - 88	B
83 - 85	B–
80 - 82	C+
77 - 79	C
75 - 76	C–
73 - 74	D+
71 - 72	D
69 - 70	D–
0 - 68	F

10. If you have a concern about this course that cannot be resolved by speaking with your instructor then please contact the course coordinator, Joan Campbell, 543 NI, ext. 4882, [j.campbell@neu.edu](mailto:j.campbell@neu.edu) or the Undergraduate Director of the Department of Mathematics, Professor Alexander Martsinkovsky, 471 Lake Hall, ext. 5510, [alexmart@neu.edu](mailto:alexmart@neu.edu).
11. You may receive any extra help in this course at the Math Tutoring Center in 540B NI. The tutoring center offers free tutoring on an individual basis. You just need to sign up for an appointment. Please seek help as soon as you experience any difficulty, do not wait until just before an exam.

The hours for the Tutoring Center in 540B NI starting on September 17 are:  
 Monday, Tuesday & Wednesday 10:00 AM - 9:00 PM  
 Thursday 10:00 AM - 6:00 PM  
 Friday 10:00 AM - 1:00 PM

12. Review sessions will be provided for both the midterm and final exams. These sessions will be scheduled outside of class.
13. We encourage students with disabilities, including “invisible” disabilities like chronic diseases or learning disabilities, to discuss with your instructor, after class or during office hours, appropriate accommodations which might be helpful for you. Your disability must be verifiable. The Disabilities Resource Center (20 Dodge Hall, ext. 2675) can provide you with information and other assistance.

## SYLLABUS

### Section    Topic

8.2	Venn Diagrams
8.1	Sets
8.3	Introduction to Probability
8.4	Basic Concepts of Probability
8.5	Conditional Probability and Independent Events
8.6	Bayes Theorem
9.1	Probability Distributions and Expected Value
9.2	Multiplication Principle, Permutations and Combinations
8.3	Applications to Counting
9.4	Binomial Probability
6.3	Basic Matrix Operations
6.4	Matrix Products and Inverses
6.5	Applications of Matrix Multiplication and Matrix Inverses
9.5	Markov Chains
9.6	Decision Making
	Linear Regression

### Important Dates

Wednesday 9/19	Last day to file a final exam conflict form
Friday 9/21	Last day to drop a Fall class without a “W” grade
Monday 10/8	Columbus Day - no classes
<b>Wednesday 10/17</b>	<b>Tentative date for midterm exam</b>
Monday 11/12	Veterans’ Day Observed - no classes
Friday 11/16	Last day to drop a Fall class with a “W” grade
Wednesday 11/21	Thanksgiving recess begins - no classes
Monday 11/26	Classes resume
Wednesday 12/5	Last day of classes
Thursday 12/6	Reading Day
<b>Monday 12/10</b>	<b>Final Exam 10:30 AM - 12:30 PM</b>