

Math 105 - Finite Mathematics

Course Syllabus

Fall 2016

Instructor : Dr. Edward Burkard
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Office : Copley 234
Office Hours : MW 15:20-16:35, F 10:30-12:00
and by appointment
Course Webpage : <http://faculty.rmc.edu/edwardburkard/?page=Teaching/105F16>
Section 3
Class Time : MW 11:30-13:00
Class Location : Copley 201D
Section 4
Class Time : MW 13:10-14:40
Class Location : Copley 205

1. CATALOG COURSE DESCRIPTION

The course provides an introduction to several areas of finite mathematics which have numerous applications, particularly in the social sciences. Topics will include mathematics of finance, discrete probability, linear programming, matrices, and linear systems.

2. TEXTBOOK

The required textbook for this class is *Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences*, 13th Edition, by Barnett, Ziegler, and Byleen.

3. CALCULATOR

You are required to have a calculator in this class; it should at least be a scientific calculator. You should bring your calculator to class every day. You may use a calculator app on your phone during class, but you may not use it on quizzes and exams. For quizzes and exams, you will need to use an actual calculator. Any calculator you use on a quiz or exam should be allowable on the SAT: <https://collegereadiness.collegeboard.org/sat/taking-the-test/calculator-policy>

4. GRADE

Your grade will be determined as follows:

| Item | Homework | Quizzes | Midterms | Final | Attendance and Participation |
|------------|----------|---------|----------|-------|------------------------------|
| Percentage | 15% | 18% | 36% | 25% | 6% |

Your grade will be determined by the percentage of the total points you've obtained. The grade scale will be no stricter than

| | | | | | |
|--------|-----|-----|-----|-----|----|
| Letter | A | B | C | D | F |
| Cutoff | 92% | 82% | 72% | 57% | 0% |

with +’s and –’s to be used as needed for the final grade only. That is, getting at least 92% will guarantee an A, getting at least 82% will guarantee a B, getting at least 72% will guarantee a C, and getting at least 57% will guarantee a D.

4.1. **Quizzes.** Every day which is not an exam day there will be a quiz. There will be two types of quizzes in this class: on Wednesdays there will be a short, one problem quiz, and on Mondays there will be a slightly longer two or three problem quiz. Quizzes will always take place at the beginning of class. The Wednesday quizzes will be a simple three minute quiz asking for a definition or a formula. These will be graded out of 3 points: 3 points for a correct answer, 2 for any attempt, 1 point for submitting a blank quiz, and 0 only for not showing up on time for the quiz. The Monday quizzes will consist of one problem just like the Wednesday quiz and one or two additional problems involving working through problems.

The lowest Wednesday quiz score will be dropped. If you have not missed any Monday quizzes (except with an appropriate excuse), the lowest score will be replaced by the average of the other quizzes.

4.2. **Attendance and Participation.** Attending class every day is mandatory and is a portion of your grade. 6% of your grade comes from attendance and class participation. 3% comes from attendance which involves arriving to class on time. The remaining 3% comes from participation. This involves being actively engaged in the class and asking relevant questions. Three unexcused absences from class will forfeit all 6% of the grade from this category and each subsequent unexcused absence will take a further 2% off your overall grade.

4.3. **Exams.** There will be 3 midterm exams for this class. The tentative exam dates are September 26th, October 24th, and November 21st. If the exam dates change need to change, you will be given at least one week notice. Each midterm exam will account for 12% of the overall grade. The final for Section 4 is on Wednesday, December 14th, and the final for Section 3 is on Friday, December 16th. The final exam accounts for 24% of the overall grade. Most exam problems will closely resemble those of the homework and quizzes.

4.4. **Homework.** Homework will be assigned every class day and will be due the Monday of the following week. (For example, the homework assigned on September 5th and 7th will be due on the 12th, and the homework assigned on September 12th and 14th will be due on the 19th.) There are two exceptions to this around the holidays (see the schedule below). You are free to, and even encouraged to, work with other classmates on the homework, but the work you turn in must be your own. Your score on an assignment will be based on completeness of the assignment and correctness of select exercises.

5. COURSE OUTLINE

5.1. **Topics Outline.** This is a proposed outline of the course. It is possible we will get ahead or fall behind this, but we will at least cover Chapters 3, 4, 5, and 8. Topics we will cover are financial mathematics (including interest and annuities), systems of equations and their solutions using matrices, linear programming, probability, and if time permits, some simple game theory.

| Week | Monday | Wednesday |
|------|-----------------|--------------|
| 1 | Intro, 2.5, 2.6 | 3.1 |
| 2 | 3.2 | 3.3 |
| 3 | 3.4 | 4.1 |
| 4 | EXAM I | 4.2 |
| 5 | 4.3 | 4.4 |
| 6 | 4.5 | 4.6 |
| 7 | Fall Break | 4.7 |
| 8 | EXAM II | 5.1 |
| 9 | 5.2 | 5.3 |
| 10 | 8.1 | 8.2 |
| 11 | 8.3 | 8.4 |
| 12 | EXAM III | Thanksgiving |
| 13 | 8.5 | 10.1, 10.2 |
| 14 | 10.2, 10.3 | Review |

5.2. Assignment Outline.

| Week | Monday | Wednesday |
|------|-------------|--------------|
| 1 | N/A | WQ 1 |
| 2 | MQ 1, HW 1 | WQ 2 |
| 3 | MQ 2, HW 2 | WQ 3 |
| 4 | EX 1, HW 3 | WQ 4 |
| 5 | MQ 3, HW 4 | WQ 5 |
| 6 | MQ 4, HW 5 | WQ 6 |
| 7 | Fall Break | WQ 7 |
| 8 | EX 2, HW 6 | WQ 8 |
| 9 | MQ 5, HW 7 | WQ 9 |
| 10 | MQ 6, HW 8 | WQ 10 |
| 11 | MQ 7, HW 9 | WQ 11 |
| 12 | EX 3, HW 10 | Thanksgiving |
| 13 | MQ 8 | WQ 12 |
| 14 | MQ 9, HW 11 | WQ 13 |

(EX = Exam, MQ = Monday Quiz, WQ = Wednesday Quiz, HW = Homework)

6. DISABILITY

Randolph-Macon College is committed to providing access to programs and services for qualified students with disabilities. If you are a student with a disability and require accommodations to participate and complete requirements for this course, notify me immediately and contact the Disability Support Services Office (DSS@rmc.edu or 804-752-7343) for verification of eligibility and determination of specific accommodations.

7. CODE OF ACADEMIC INTEGRITY

Your compliance with the Code of Academic Integrity is assumed at all times in this class. This includes, but is not limited to, submitting your own work (even if you work together on assignments) and not cheating on exams. Please make sure you have read and understand it.

8. CONDUCT

You are expected to act in a respectable manner. If you are disruptive, you will be asked to leave, and you will forfeit your attendance points for the day. If you have a cell phone, please turn it off (or at least place it on silent) during class time. Lectures being interrupted by cell phones going off is disrespectful to everyone in the classroom.

Material in the syllabus is tentative, and I reserve the right to change any information in this syllabus in the event of an unforeseen event.