

# MATH 017 B – Applications of Finite Math

## Fall 2018

**Course Location:** Lafayette L107

**Course Time:** MWF 3:30-4:20pm

**Instructor:** Tyson Pond

**Office:** 16 Colchester Ave. (Henry Marcus Lord House), Room 101-102

**Office Hours:** MWF 2:00-3:00pm or by appointment

**Email:** tpond@uvm.edu

### Course Objectives

The primary goal of this course is to illustrate how mathematics can be applied to solve a variety of real-world problems. This course is intended for students that need to fulfill a math requirement but are not required to take calculus by their major, and that would like an exciting alternative to calculus.

### Course Materials

- The recommended text is *Excursions in Modern Mathematics* by Peter Tannenbaum (9th edition). Lectures will closely follow this text; however, students will not be assessed on any contents of the text which are not also covered in class or via Blackboard.
- A scientific calculator will be required for quizzes and exams.

### Homework

There will be no formal homework assignments. I will post recommended practice problems on Blackboard to supplement what is covered in class. It is in your best interest to at least look through these materials – as the assessments will draw heavily from them – but I will not collect your work.

### Grading

- 22% Quizzes: There will be a quiz roughly every Friday at the start of class, unless announced otherwise. There will be no quiz on the week of an exam. If you arrive to class late and the quiz has already started then you will not be given extra time to complete the quiz. Make-up quizzes will not be offered (exceptional cases are religious holidays and athletic obligations, given that I am notified well in advance). The two lowest quiz grades will be dropped to account for unavoidable absences.
- 66% Exams (22% each): There will be two midterm exams (Exam 1 on October 5 and Exam 2 on Wed November 14) and a final exam on December 10 at 4:30pm in Lafayette L107. All exams are expected to be non-cumulative. Make-up exams may be arranged if I am notified well in advance.
- 12% Participation: There will be many opportunities in-class and out-of-class (i.e. office hours, Blackboard discussions) to participate. Consistent absences or disruptive behavior (including in-class cellphone use) may reflect poorly in your participation grade. When calculating final grades, I will determine the rounding of a borderline grade based on participation.

## Math Help Sessions

Free help sessions for MATH 001-023 are held weekly Monday through Thursday from 5-7pm in Lafayette L400. I will be there Monday 6-7pm and Wednesday 5-6pm.

## Academic Honesty

Students are expected to understand and comply with the UVM Code of Academic Integrity. Violations of this policy will be taken seriously and will be met with necessary consequences.

## Accommodations

Students with disabilities or special needs should contact the instructor and provide appropriate documentation within the first two weeks of the semester so that accommodations can be made.

## Religious Holidays

UVM students have the right to practice their religion. Students should submit in writing, within the first two weeks of class, their documented religious holiday schedule for the semester. Students who miss work because of religious holidays are allowed to make up this work.

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## Tentative Schedule of Topics

Unit 1: Social Choice

- Chapter 1: Voting Methods
- Chapter 2: Weighted Voting
- Chapter 3: Fair Division
- Chapter 4: Apportionment

**Exam 1: Friday, October 5**

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Unit 2: Financial Math, Probability and Statistics

- Chapter 10: Finance
- Chapter 14: Collecting Statistical Data
- Chapter 15: Descriptive Statistics
- Chapter 17: The Normal Distribution

**Exam 2: Wednesday, November 14**

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Unit 3: Graphs and Networks

- Chapter 5: Getting Around
- Chapter 6: Touring

Other topics if time permits

**Exam 3: Monday, December 10 at 4:30pm**