MATH 1030Q: Elementary Discrete Mathematics Section 001

Spring 2024

Basic Information:

Instructor: Nicole Massarelli, Ph.D.
Email: nicole.massarelli@uconn.edu
*Please state which course and section you are in when you send emails!
Office: MONT 303
Office Hours: Tuesdays 12 – 1:30 pm (tentatively)
Thursdays on Webex 2 – 3pm
Or by appointment
Teaching Assistant: Paul Tee, paul.tee@uconn.edu

Course Materials: The *FREE* textbook for the course is "Math in Society" by David Lippman. http://www.opentextbookstore.com/mathinsociety/ We will also use My Open Math for *FREE* online homework. Please also make sure to have access to Microsoft Excel or Google Sheets.

Class Meetings: MWF 11:15 – 12:05 pm, Mont 104

Course Description: This course includes a sampling of topics from discrete mathematics. These include counting and probability, graph theory, scheduling, voting methods, apportionment methods, growth models, and mathematics of finance.

Course Objectives:
The goal for this semester is to learn mathematical ideas relevant to everyday life to improve: critical thinking skills, problem-solving, and communication. You will not be required to memorize formulas but rather learn how to apply them to solve new problems. This course will consist of practicing reasoning and problem-solving skills and discussing problems with others to build mathematical communication skills.

Homework: Mathematics is best learned over time and with regular practice, and most of this learning occurs outside of the classroom. I encourage you to try and do as much work as you can without looking at your book and notes, which will be incredibly helpful in highlighting what you need to practice further for the quiz.

We will use My Open Math to do online homework: https://www.myopenmath.com/index.php. Homework will always be due on Fridays, the same day that we have the chapter quiz; if we work on a topic for two weeks, then the homework is not due for a few weeks, but I strongly advise starting it sooner! You will need to register for a student account and use the following to get enrolled in the course:

Course ID: 238993 Enrollment Key: 1030Q001F24

You will be allowed to use one LatePass for the online homework. This will extend the deadline for the assignment by 24 hours. Note: each assignment will remain available after the due date in "review mode" for extra practice. If you enter review mode, you are no longer able to use your LatePass. Similarly, if you view your score in the gradebook this will show the correct answers for the assignment, and you will no longer be able to use your LatePass. It's best to keep up with the deadlines and save your LatePass for an unexpected delay.

Quizzes: We will cover seven chapters in this course, and there will be a quiz at the end of each chapter on the following Friday that will be completed in groups. You will be expected to turn in your own work for each quiz and list the names of any other students that you worked with on the quiz, **with at most 3 people per group**. No resources other than those explicitly allowed may be used to complete the quizzes. Any group members that submit identical documents (identical phrasing, handwriting, etc.) will receive zeros. Your written work should reflect your individual thinking after discussing the problems with your group.

Quizzes will be graded and returned via Gradescope. We will discuss more details as we near the first quiz. Your lowest score on one (1) quiz will be dropped at the end of the semester. There is no final exam for this course. If you need to reschedule a quiz for any reason, please talk to the instructor immediately.

Understanding Checks (CYUs): On Fridays when there is no quiz, we will have understanding checks (indicated on the course schedule). These will consist of 1 or 2 problems that will be turned in by the end of class. These will help you prepare for the quiz the following week. CYUs will be graded but you can use your notes, discuss the problems with others, and ask questions. There will be no makeup CYUs but your lowest score will be dropped at the end of the semester.

Final Paper: We will discuss the particulars later in the course, but you will write a paper on how mathematics is used in a topic that interests you in lieu of a final exam. You will have at least the last week of class and part of finals week to complete and submit your paper. This assignment is completed individually, and there will be a potential to earn extra credit if you submit a rough draft for feedback by Wednesday of the last week of classes (see schedule).

Grading:

Homework	20%
CYUs	5%
Chapter Quizzes	60%
Final Paper	15% (+ bonus on score for rough draft)
Total Score out of	100%

The grading scale used will be 92.5%+ A, 89.5-92.49 A-, 86.5-89.49 B+, 82.5-86.49 B, etc.

Academic Integrity: Please respect your work and the work of others. Cheating will be taken seriously. Examples of things that will be addressed include, but are not limited to, communicating with anyone not explicitly allowed during any quiz or exam, representing another person's work as your own (this includes copying or paraphrasing a solution from a friend, solution manual, tutor, or website), or bringing unauthorized materials to any quiz or exam. Consequences may include, but are not limited to, a score of zero on the assignment, quiz, or exam, or a grade of F in the course. To read UConn's full policy on Academic Integrity, visit community.uconn.edu/the-student-code-appendix-a/.

How to Succeed in This Course:

- Complete all assignments
- **Print the schedule and/or set due date reminders**
- Read through the material BEFORE the week begins to get an idea of what we will cover (see course schedule). This will help you to follow the topics and ideas more closely and ask questions that will better help you to understand the concepts and mechanics.

- Practice problems regularly and beyond what is on the homework
- Make sure to attend classes and actively participate (take notes, ask questions, etc.)
- Read the textbook and work through the Try it now problems

Attendance: This course covers a lot of material, and you are expected to do an appropriate amount of work outside of class, which may consist of more than just the homework problems. There will be time in class to ask questions and review, but you must come to class prepared to discuss the material to make the most of this.

If you absolutely need to miss class on one or more instances, please discuss this with me as soon as possible. You are responsible for any material that you miss.

Late Work Policy: Late work will not be accepted or graded unless you speak with the instructor.

Grading Policy: Your quizzes and CYUs will be returned to you via Gradescope in a timely manner, usually by the following week. If there are any issues, please talk to me after class on the day it is graded or ASAP.

Extra Credit: There are two ways to improve your grade in this course:
1. Your lowest chapter quiz score is dropped
2. You can earn extra credit by submitting a rough draft of your final paper

Course Outline and Schedule: (this is tentative and could change)

Week	Week of	Topic(s) Covered
1	8/26	Voting Methods, Part 1 (pgs. 35-42, stop at Borda Count)
2	9/2	Voting Methods, Part 2 (pgs. 42-52) **Voting Theory CYU (Friday, 9/6)**
3	9/9	Weighted Voting Systems (pgs. 59-69) Voting Methods HW Due Friday, 9/13 **Voting Methods Quiz (Friday, 9/13)**
4	9/16	Apportionment, Part 1 (pgs. 75-83) Weighted Voting HW Due Friday, 9/20 **Weighted Voting Quiz (Friday, 9/20)**
5	9/23	Apportionment, Part 2 (pgs. 84-90) **Apportionment CYU (Friday, 9/27)**
6	9/30	Graph Theory, Part 1 (pgs. 117-132, stop at Hamiltonian Circuits) Apportionment HW Due Friday, 10/4 **Apportionment Quiz (Friday, 10/4)**
7	10/7	Graph Theory, Part 2 (pgs. 132-145) **Graph Theory CYU (Friday, 10/11)**
8	10/14	Growth Models (pgs. 177 – 183) Finance, Part 1 (pgs. 197-204, stop at Annuities) Graph Theory HW Due Friday, 10/18 **Graph Theory Quiz (Friday, 10/18)**
9	10/21	Finance, Part 2 (pgs. 204-221) **Finance CYU (Friday, 10/25)**

10	10/28	Scheduling (pgs. 155-168) Finance HW Due Friday, 11/1 **Finance Quiz (Friday, 11/1)**
11	11/4	Sets (pgs. 319 – 329) Scheduling HW Due Friday, 11/8 **Scheduling Quiz (Friday, 11/8)**
12	11/11	Probability, Part 1 (pgs. 279-289) Sets HW Due Friday, 11/15 **Sets CYU (Friday, 11/15)**
13	11/18	Probability, Part 2 (pgs. 293-309) **Probability CYU (Friday, 11/22)**
	11/25	Thanksgiving Break- No class
14	12/2	Review Probability Work on Final Paper, submit rough draft on Wednesday, 12/4 for extra credit Probability HW Due Friday, 12/6 **Probability Quiz (Friday, 12/6)**
	12/10	**Final Paper Due Wednesday, 12/11 by 11:59 PM**

Student Responsibilities and Resources
As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
  - Academic Integrity
  - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities
The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)