MATH 1030Q: Elementary Discrete Mathematics

Spring 2023

Basic Information:

Instructor: Anthony Rizzie, Ph.D.
Email: anthony.rizzie@uconn.edu *Please state which course you are in when you send emails!
Office: MONT 412

Office Hours: Wednesdays during class time and by request/appointment
Teaching Assistant:
Section 1 (9:05 AM) Chinmay Dharmendra (chinmaymd@uconn.edu)
Section 2 (10:10 AM) Wahid Akhtar (wahid.akhtar@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.

Weekly Schedule:

Mondays- live, synchronous class to discuss that week's topics and do examples
Wednesdays- unstructured time for Q&A during class time
Fridays- chapter quizzes will take place on Fridays (no quiz that week means no class!)

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 beneficial in diagnosing what you need to practice most while studying for the quizzes.

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 the following to get enrolled in the course:

Course ID: 173592 **Enrollment Key: 1030QS23**

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 6 people per group**. No resources other than those explicitly allowed may be used to complete the quizzes. The quizzes will take place during the scheduled class time. You will have some time before class to access the quiz so that you can download and print it (if preferred) and time after class ends to upload your work. Instructions for completing and submitting the quizzes on HuskyCT will be provided as we get closer to the first quiz. Work MUST be handwritten. Any group members that submit identical documents (identical phrasing, handwriting, etc.) will receive zeros.

Work will all be submitted 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.

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%
Chapter Quizzes	60%
Final Paper	20% (+20% 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 the live classes and actively participate (take notes, ask questions, etc.)
- Read the textbook and watch the videos on the week's content

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 ample opportunities for questions and review, which are designed to lessen the burden of work outside of the classroom and give you a chance to ask questions as you come across them and work closely with me, the TA, and other students.

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 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	1/16	Voting Methods, Part 1 (pgs. 35-42, stop at Borda Count)
2	1/23	Voting Methods, Part 2 (pgs. 42-52)
3	1/30	Weighted Voting Systems (pgs. 59-69) Voting Methods HW Due Friday, 2/3 **Voting Methods Quiz (Friday, 2/3)**
4	2/6	Apportionment, Part 1 (pgs. 75-83) Weighted Voting HW Due Friday, 2/10 **Weighted Voting Quiz (Friday, 2/10)**
5	2/13	Apportionment, Part 2 (pgs. 84-90)
6	2/20	Graph Theory, Part 1 (pgs. 117-132, stop at Hamiltonian Circuits) Apportionment HW Due Friday, 2/24 **Apportionment Quiz (Friday, 2/24)**
7	2/27	Graph Theory, Part 2 (pgs. 132-145)
8	3/6	Finance, Part 1 (pgs. 197-204, stop at Annuities) Graph Theory HW Due Friday, 3/10 **Graph Theory Quiz (Friday, 3/10)**
	3/13	**SPRING BREAK, NO CLASS**
9	3/20	Finance, Part 2 (pgs. 204-221)
10	3/27	Scheduling, Part 1 (pgs. 155-163, stop at Critical Path Algorithm) Finance HW Due Friday, 3/31 **Finance Quiz (Friday, 3/31)**
11	4/3	Scheduling, Part 2 (pgs. 163-168)
12	4/10	Probability, Part 1 (pgs. 279-289, stop at and skip Bayes' Theorem) Scheduling HW Due Friday, 4/14 **Scheduling Quiz (Friday, 4/14)**
13	4/17	Probability, Part 2 (pgs. 293-309)
14	4/24	Work on Final Paper, submit rough draft on Wednesday, 4/26 for extra credit Probability HW Due Friday, 4/28 **Probability Quiz (Friday, 4/28)**
	5/3	**Final Paper Due Wednesday, 5/3 by 11:59 PM**