MATH 1020-811

Summer I, 2026

Faculty Information:

- Name: Dr. Amineh Farzannia
- Office Location: Online
- Office Hours: MW 1:00 PM-2:00 PM or by Appointment
- Email: amineh.farzannia@uconn.edu

Course delivary:

This course is a synchronous course but before the start of the semester all the lecture notes and recordings will be uploaded. Student will be able to cover the course at their own pace. We still stream the class online and attendance is not mandatory.

Description: An introduction to the techniques used by mathematicians to solve problems. Skills such as Externalization (pictures and charts), Visualization (associated mental images), Simplification, Trial and Error, and Lateral Thinking learned through the study of mathematical problems. Problems drawn from combinatorics, probability, optimization, cryptology, graph theory, and fractals. Students will be encouraged to work cooperatively and to think independently. Not eligible for course credit by examination. Enrollment Requirements: Recommended preparation: MATH 1011Q or equivalent. Not open for credit to students who have passed any math course other than MATH 1010Q, 1011Q, 1020Q, 1030Q, 1040Q, 1050Q, 1060Q, or 1070Q.

Please consider enrolling early in this course, as it typically fills quickly. Once the add/drop period ends, no additional students can be accommodated if the class has reached capacity.

Textbook:

PProblem SSSolving, by DeFranco and Vinsonhaler, 2nd Edition.

Course Objectives: This course focuses on techniques and applications of integral calculus, infinite series, and differential equations. Concepts will be treated from a geometric, algebraic, and numerical perspective.

Homework:

Homework: Hws will be posted on HuskyCT and students will submit their work(solutions) on HuskyCT.

*Warning: When accessing your online homework, use **Firefox or Chrome as your browser**; there are problems that can occur if you use Internet Explorer or Safari. **Please use this** Tips for Students on Using WebAssign **document for help with accessing WebAssign and entering your answers correctly.***

Note: Due date for all Hws is July 2nd.

Exam information Piazza discussion

No Exam for the course. Students should post a short video explaining their understanding of the problem on HuskyCt.

Class Participation: We use Piazza for class participation in this course. Students will enrolled in Piazza. I will check discussion boards in Piazza and give instructive hints.

Husky CT: Class lecture notes, videos and important announcements will be posted on HuskyCT.

Grading Scale: Grades will be based on the following guidelines:

- 40%-Homework
- 35% - Vidoes
- 5%– Piazza discussion
- 20% - Final project

Grading scale : 92- 100% A, 90- 92% A-, 85-90% B+, 82-85% B, 80-82% B-, 78-80% C+, 72-78% C, 70-72% C-, 60-70% = D, 0-60% = F

Academic Dishonesty: In case of academic dishonesty, you will be asked to withdraw the course and behavioral report will be submitted.

Accommodations: Any student with a documented disability and accommodations should contact Disability Support Services as soon as possible.

Respect & Civility: In addition to upholding the Academic Integrity Policy, we (students and instructor) will all work to create a classroom where people are comfortable participating. We will work together to treat each other with respect and value everyone's input and questions. There is an expectation that everyone will behave in a manner that is non-disruptive, respectful, and safe. Anyone that exhibits disruptive behavior may be asked to leave during the class in which such behavior occurs.

Diversity & Inclusivity: It is my intent that students from diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated.
Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can work together to make arrangements for you.

Academic Integrity/Misconduct

This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. In mathematics, this means that all work that you turn in should be written up independently by you, in your own words, and should represent your honest understanding of the material. On exams and quizzes, it should be noted in particular that this means you must not consult any sources or materials: neighbors' papers, calculators, and any notes, books, or electronic devices are off-limits. If you have questions about academic integrity or intellectual property, you should consult with your instructor. Additionally, consult UConn's guidelines.

MATH Q1020 Possible Schedule

Tentative Outline

Week	Material Covered	Homework Assignment
1	Chapters 1,2 - Problem Solving, PSSSP	Piazza Post, Heap Letter
2	Chapter 3 - Be Proactive	Symmetry
3	Chapter 4 - See it	Best Friends
4	Chapter 4 – See it, Chapter 5 – Simplify it	Parking Lot
5	Chapter 5 – Simplify it, Exam #1	Forty Thieves
6	Chapter 6 - Stir it up	Should You Switch?
7	Chapter 6 - Stir it up	Faculty Debts
8	Chapter 7 - Pause and Reflect	Grilled Cheese
9	Chaps 8,9 - Interpersonal, Communication	Grappling with Groups
10	Estimation	10 Ways to Measure
11	Review and Exam #2	Neighbours
12	Revisit PSSSP and work on Final Project	True and False
13	Revisit PSSSP and review for Final Exam	
14	Thanksgiving Break	
15	Present Final Project	
16	Cumulative Final Exam	