UCONN
UNIVERSITY OF CONNECTICUT

Math 1070Q – Section 020
Mathematics for Business and Economics

Syllabus – Summer Session 2, 2025

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: Mathematics for Business and Economics
Credits: 3
Format: ONLINE (OA) Asynchronous (Reading materials and course videos are available on HuskyCT)
Prerequisites: Recommended preparation: MATH 1011Q or equivalent. Not open for credit to students who have passed MATH 1132Q, 1152Q or 2142Q.
Time Zone: *All times* for due dates, student hours, etc., in this course are given in **US Eastern Time.**

Instructor: Ningwei Jiang
Pronouns: He/him;
A message from Ningwei:

> *Hello! I'm a Visiting Assistant Professor in Mathematics, and my research focuses on probability. I'm excited to spend this summer session with you as we explore different areas of math together.*
>
> *I wanted to create a learning environment where you feel supported, challenged, and encouraged to grow—not just as a math student, but as a thinker and problem-solver. Whether math has always been your strength or you're feeling a little unsure, you belong in this space. We'll work together to help you succeed.*
>
> *Please don't hesitate to ask questions, share ideas, or reach out when you need help. I encourage you to make use of student hours—they're a great time to talk through course content, work on problems, or discuss any questions you have about the class. I'm always happy to support your learning in whatever way I can.*

Student Hours (Week 1-5): There will be student hours several days a week. Schedules will be shared the week before classes start and will be adjusted throughout the summer session based on your needs and/or availability. You can locate them in the "Welcome and Overview" section of HuskyCT.
Communications: I will make frequent use of the Announcements tab on HuskyCT to keep you updated during the session. I will expect you to check your email regularly so that you know when an announcement has been posted. Also, if you have any questions or concerns, please email me at ningwei.jiang@uconn.edu. I will respond to email questions within 24 hours during weekdays.

Course Materials

Textbook: *Applied Finite Mathematics by Edmond C. Tomastik and Janice L. Epstein (bundled with WebAssign Code for online homework).*

I expect you to have access to a computer with webcam to use Lockdown Browser for exams (Authentication of Students in Online Courses) and a way to submit PDFs of handwritten work.

Calculators: In general, calculators, including graphing calculators, are allowed on quizzes/exams. Models that can perform symbolic manipulation (e.g. take derivatives) are not allowed.

Graphing calculators: TI 82, 83, 84, 84 plus, 85 or 86 may be used. Models TI-89 and above (including TI-Nspire) are not permitted on the quizzes/exams. You will need (at the least) a basic calculator that can do powers, exponentials and logarithms.

HuskyCT: Course materials (Videos and Readings), WebAssign (additional Online Practice Problems), Quizzes, Worksheets and Exams will be available under our course at https://huskyct.uconn.edu.

Course Description

Linear equations and inequalities, matrices, systems of linear equations, and linear programming; sets, counting, probability and statistics; mathematics of finance; applications to business and economics.

Course Objectives

By the end of the semester, students will be able to:

1. Understand the basics of sets and know how to find the size of sets.
2. Know how to solve various probability problems including understanding conditional probability and Bayes' Theorem.
3. Understand how permutations and combinations work and how they are related to probability.
4. Know how to calculate values for Bernoulli Trials.
5. Understand what random variables are and how to calculate measures of central tendency and spread. Understand the normal distribution.
6. Work with simple and compound interest problems and annuities and amortization.
7. Work with and create simple mathematical models.
8. Know how to solve systems of linear equations, including using linear programming.
9. Work with matrices, carry out matrix multiplication and Gaussian Elimination.
10. Use matrices to solve systems of equations.

Course outline

Module 1: Sets and Probability (Chapter 4)
Module 2: Counting and Probability (Chapter 5)
Module 3: Probability Distribution and Statistics (Chapter 6)
Module 4: Finance (Chapter F)
Module 5: Linear Programming (Chapter 3)
Module 6: Systems of Equations and Matrices (Chapters 1 and 2)

Section outline

This course is designed to support both independent study and deep reflection. Each section follows a consistent structure to help you build understanding step-by-step and apply what you've learned with confidence. Here's what each section includes:

1. **Reading & Foundational Practice**: begin each section by reading the assigned material. The readings introduce basic concepts and include short, simple exercises to help reinforce your initial understanding. These are designed to be approachable and are best completed as you read.
2. **Video Lessons**: after reading, you have opportunities to watch brief videos that break down the more complex ideas, demonstrate difficult examples, and walk through important techniques. These videos are meant to clarify common stumbling blocks and offer some explanations.
3. **Reflection & Self-Evaluation**: at the end of each section, you'll complete a short reflection. This will include a few questions designed to help both you and me:
    - Check the understanding of key concepts
    - Identify areas where you feel confident or uncertain

Schedule (Tentative)

Week	Sections	Assessments
1	4.1-4.6	Quiz 1-2, Worksheet 1, Reflections and WebAssign HW
2	4.7, 5.1-5.4	Quiz 3-4, Worksheet 2, Reflections and WebAssign HW
3	6.1-6.4, F.1-F.2	Quiz 5, Worksheet 3, Reflections, WebAssign HW, and Exam 1
4	F.3-F.4, 1.1-1.2, 3.1-3.3	Quiz 6-7, Worksheet 4, Reflections and WebAssign HW
5	2.1-2.2, 1.3-1.4	Quiz 8, Worksheet 5, Reflections, WebAssign HW, and Exam 2

Course Grading and Requirements

Course Components	Weight
WebAssign	20%
Quizzes	15%
Worksheets	15%
Exam 1	20%
Exam 2	20%
Section Reflection	10%

I will post all grades on HuskyCT.

Section Reflections: At the end of each section, you will be invited to complete a short reflection to share your understanding of the material. These reflections are not graded for right or wrong answers—they are an opportunity for you to think critically about what you've learned, where you're confident, and where you are struggling so we will explore together during the student hours. Full credit is given for honest, thoughtful effort and completion.

WebAssign Online Homework: There will be online homework (bundled with the textbook) for MATH 1070Q via WebAssign. WebAssign must be accessed through HuskyCT. All Online homework is due 11:59 PM on Saturday each week. The recommended completion dates will be listed on HuskyCT under each module. You will get 20 attempts for each question that is not multiple choice or T/F (attempts on multiple choice questions and T/F vary). After each attempt, you will be told whether your answer is correct or not. If you are not able to get the correct answer after your initial attempts, we recommend that you seek help from your instructor, or another student before attempting to answer the problem again.

Worksheets: There will be one worksheet each week. All worksheets must be submitted by 11:59 pm on Saturday. Your worksheet grade is based on **two** components. **First**, you must complete the problems to the best of your ability using your course notes and the textbook. You are welcome to use additional resources but must list these sources. Once you have completed the assignment, you should submit it to HuskyCT. Once you have submitted it, you will be given access to the solutions. **You must use the solutions to check your answers and then fill out the reflection activity for each assignment.** The

initial submission will be graded on completeness while the reflection will be graded based on the rubrics provided on HuskyCT.

Quizzes: There are two closed-book quizzes each week (except week 3 and week 5). Each quiz allows three attempts and your higher score will count, but you will be given slightly different problems for each attempt. You may use one sheet of notes during the quiz, but no other resources are allowed. The quizzes are open from Wednesday (or earlier) through Saturday each week. Sources to prepare for the quizzes: the textbook examples, WebAssign online homework, worksheets and class slides.

Exams: We will have two closed-book exams during week 3 and 5, and each will cover approximately two and a half weeks' course materials and is **NOT** cumulative. Each exam requires Lockdown Browser with Respondus Monitor (WebCam Required). You may use one sheet of notes during the test. You will also have access to Desmos.com. No other resources are allowed. The exams are open from Wednesday (or earlier) through Friday for those students who want to take it earlier.

Exams will be released on HuskyCT in the Exams folder between different modules. Before you begin, make sure you have a stable internet connection and have enough time to complete the exams in one session (cannot pause and resume). Each exam will have TWO parts: Multiple-Choice and Free Response.

1. You must follow the instructions to answer each question and **scan your written work for Free-Response questions as a single PDF file** and upload the file on HuskyCT for initial submissions.

Exam (Multiple-Choice) Retry: You may choose to retake the Multiple-Choice of each exam. The score on the retake will replace the score on the first try of that exam, if higher. The retakes for each exam must be completed by 11:59 pm on August 16th.

Exam (Free-Response) Resubmission: You will have an opportunity to correct and resubmit exam free response questions on HuskyCT to earn back points. For each point lost, you can earn up to 1/2 point back. **Resubmitted solutions must be completely correct and submitted within 48 hours after the graded submission is initially returned to you via email in order to earn back points.** Additionally, resubmitted solutions must be numbered, neatly written. Please note that while you can discuss potential corrections with classmates, final write-ups should be done in your own words.

Grading Scale

Grade	Letter Grade
93-100	A
90-92.99	A-
87-89.99	B+
83-86.99	B
80-82.99	B-
77-79.99	C+
73-76.99	C
70-72.99	C-
67-69.99	D+
63-66.99	D
60-62.99	D-
<60	F

Course Policies

Late Work: If you need to submit work late, please email your instructor. I will generally expect students to meet the weekly deadline and complete quizzes/exams on time, but I understand that sometimes events out of your control happen. Please reach out to me, and I will do my best to work with you in a way that is consistent, compassionate, and fair. **Do not wait until the last day of the course** to discuss grade issues! The sooner I am aware of issues, the more able I will be able to help you.

Exceptions to this policy will only be made under extenuating circumstances, and on a case-by-case basis.

Exam/Quiz Makeup Policy: Since this is an online course and you are given enough flexibility for the tests, no make-up request will be approved.

Feedback and Grades: Online Homework are graded automatically on HuskyCT. The grades for worksheets will be posted within 72 hours after the original due date. Exams will be returned with comments within 48 hours after the initial submission, and the grades will be updated after grading your exam resubmissions on HuskyCT.

Extra Credit: There will be some bonus points for each WebAssign homework if you complete it 24 hours before the weekly deadline.

Individual requests for extra credit will not be granted, but the entire class might receive additional credit opportunities.

I expect you to submit all the work by 11:59 PM on August 16, 2025 because this will ensure that I am able to report your grades to the Registrar by the Grade deadline.

Weekly Time Commitment

You should expect to dedicate 42 - 56 hours a week to this course. This expectation is based on the various course activities, assignments, and assessments and the University of Connecticut's policy regarding credit hours. More information related to hours per week per credit can be accessed at the Online Student website.

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in online courses and to establish that students who register in an online course are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

1. Secure access to the learning management system using your unique UConn NetID and password.
2. Online proctoring during exams using Lockdown Browser with Respondus Monitor.

Information about Lockdown Browser and Respondus Monitor can be found here: https://kb.uconn.edu/space/TL/10731881788.

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. 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)

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- Equipment Recommendations (https://remotework.uconn.edu/equipment-recommendations/)
- HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement, HuskyCT/ Blackboard Privacy Policy)
- Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)
- Google Apps (Google Apps Accessibility, Google for Education Privacy Policy)
- Microsoft Office (free to UConn students through uconn.onthehub.com) (Microsoft Accessibility Statement, Microsoft Privacy Statement)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).
- WebCam

Privacy Statement: For information on managing your privacy at the University of Connecticut, visit the University's Privacy page. NOTE: This course has NOT been designed for use with mobile devices.

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course uses the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

Academic Integrity

Learning math is a process, and it's okay if that process includes challenges. The best way to grow as a learner is to work through problems on your own and take ownership of your understanding—even when it's hard. In our class, you are expected to follow the university's academic honesty policies, but also to take pride in your own progress. That means:

- Doing your own work and showing your own reasoning.
- Citing any sources you use, including explanations from websites, textbooks, or other people.
- Using tools like calculators, online resources, or AI (such as ChatGPT) **only in ways that support your learning**—not as a substitute for doing the work yourself.

If you're ever unsure about what's allowed—or if you're feeling stuck—please reach out and utilize the student hours. You don't have to go through it alone. I'm here to help, and there are also great campus and online resources. It's always better to ask for help than to risk your integrity.

This is a space where effort and honesty matter more than perfection.

Evaluation of Course Experience

Students will be given an opportunity to provide feedback on their course experience and instruction using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

The University of Connecticut is dedicated to supporting and enhancing teaching effectiveness and student learning using a variety of methods. The Student Evaluation of Teaching (SET) is just one tool used to help faculty enhance their teaching. The SET is used for both formative (self-improvement) and summative (evaluation) purposes.

Additional informal formative surveys and other feedback instruments may be administered within the course.