# Syllabus – Fall Semester, 2026

**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
**Prerequisites:** Recommended preparation: MATH 1011Q or equivalent. Not open for credit to students who have passed MATH 1132Q, 1152Q or 2142Q.

**Instructor Information:**
My name is Nicole Massarelli, and I am your instructor for MATH 1070Q at the University of Connecticut. If you have any questions about the course, please feel free to contact me at **nicole.massarelli@uconn.edu**.

**Nicole's Office Hours:** Tuesday 10am-12pm and Thursday 11am -1pm in Mont 306

**Teaching Assistants:** TBD

If you have any questions about the course material please join one of our office hours or review sessions or send an email. The Q Center is also available to help, and they have tutors for MATH 1070 available nearly every day.

## Course Materials

We will be using WebAssign for homework. You can find the links to the homework in the WebAssign folder. You can find more information on the Cengage course page which we will share when it becomes available.

Everyone has access to the WebAssign homework for the first 2 weeks of the semester, so you can start immediately while you arrange for access and wait for your textbook/code order to arrive. After the initial 14-day grace period, you will need to have a WebAssign access code. If you subscribe to the bookstore bundle, WebAssign access should be included.

WebAssign access is separate from Cengage Unlimited. You can get WebAssign access from the WebAssign code that comes with the textbook bundle from the bookstore, by buying a standalone access code, or by subscribing to Cengage Unlimited. Cengage Unlimited is an additional subscription that gives you access to unlimited courses, more textbooks, and extra study tools. If you know you'll be taking multiple classes that use WebAssign then Cengage Unlimited may be a good deal for you, but it is not necessary for our course.

WebAssign homework assignments are **due 11:59pm on the Friday** of the week they cover. We strongly recommend that you do not leave your homework to the last minute. WebAssign homework that is submitted at least 24 hours before the due date will earn extra credit (an extra 5% of the question value).

Unless otherwise stated, WebAssign is set to require 6 decimal places of precision. We strongly recommend that you do not round and use fractional values whenever possible, or at least make sure to submit 6+ decimal places.

Here are some links that may be useful:
How to Register for WebAssign in Blackboard
WebAssign Quick Guide

**Student Authentication:**

Since this course is online, we are required to verify your identity in order for you to receive credit for completing the course. Please read the following:

"The University of Connecticut is required to verify the identity of students who participate in distance learning or online courses and to establish that students who register in these courses 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. Students use their NetID and password to access course activities, content, and assessments.
2. Respondus Lockdown Browser with Monitor to record student display of ID and assessment session.

Students who do not complete the above-required authentication steps may be denied access to the course and given an incomplete. Students could lose credit if faculty cannot confirm the identity of the student enrolled in the course and completing activities and assessments."

## Course Description

This course will cover a variety of math topics related to business and economics. These topics include 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.

This is an online course, and the course material can be reviewed by reading the online textbook or watching lecture videos created by my colleague, Professor Katie Hall. I highly recommend reading through the section in the textbook, recording all key formulas and procedures in your notes, and then watching the videos to see completed examples. In addition to lecture videos, I have created "Problem-Solving Tips" videos for each section. These videos are intended to help you with the homework assignments and emphasize more of the approach to solving these types of problems. You are expected to keep up with the video lectures at least the pace described in the course schedule, but you may move ahead more quickly if you'd prefer.

## Course Objectives

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

1. Describe the relations between sets, and determine the sizes of different combinations of sets.
2. Utilize the rules of probability and calculate the probabilities of different combinations of events.
3. Apply the multiplication principle to compute the number of ways a specified choice can be made out of a number of options.
4. Recognize the types of random variables, and calculate their fundamental statistics.
5. Evaluate interest earned or owed, and analyze the values of loans, funds, and investments.
6. Use linear equations to model situations with business applications and solve systems of linear equations.
7. Identify matrix properties and perform operations on matrices.
8. Solve for the optimal values of linear programs.

## Course Schedule

| Week # | Week of | Section | Topic |
|---|---|---|---|
| 1 | 8/31 | 4.1 | Introduction to Sets |
| 2 | 9/7 | 4.2 | The Number of Elements in a Set |
| | | 4.3 | Sample Spaces and Events |
| 3 | 9/14<br>*Last day to add/drop | 4.4 | Introduction to Probability |
| | | 4.5 | Rules for Probability |
| 4 | 9/21 | 4.6 | Conditional Probability |
| | | 4.7 | Bayes' Theorem |
| **Exam 1 covering Chapters 4 (4.1-4.7) on Tuesday 9/29** | | | |
| 5 | 9/28 | 5.1 | Multiplication Principle and Permutations |
| | | 5.2 | Combinations |
| 6 | 10/5 | 5.3 | Probability and Counting |
| | | 5.4 | Bernoulli Trials |
| 7 | 10/12 | 6.1 | Random Variables |
| | | 6.2 | Measures of Central Tendency |
| 8 | 10/19 | 6.3 | Measures of Spread |
| | | 6.4 | Normal Distributions |
| **Exam 2 covering Chapter 5 and 6 (5.1-5.4, 6.1 – 6.4) on Tuesday 10/27** | | | |
| 10 | 10/26 | F.1 | Simple Interest and Discount |
| | | F.2 | Compound Interest |
| 11 | 11/2 | F.3 | Annuities |
| | | F.4 | Present Value of Annuities and Amortization |
| 12 | 11/9 | 1.1 | Mathematical Models |
| | | 1.2 | Systems of Linear Equations |
| 13 | 11/16 | 1.3 | Gaussian Elimination |
| | | 1.4 | Systems of Equations with Non-Unique Solutions |

| Week # | Week of | Section | Topic |
|---|---|---|---|
| **11/22-11/28 Thanksgiving Break: NO CLASSES** | | | |
| **Exam 3 covering Appendix F and Ch 1( 1.1 – 1.4) on Tuesday 12/1** | | | |
| 14 | 11/30 | 2.1 | Introduction to Matrices |
| | | 2.2 | Matrix Multiplication |
| 15 | 12/7 | 3.1 | Linear Programming |
| | | 3.2 | Graphing Linear Inequalities |
| | | 3.3 | Solving Linear Programming Problems |
| **Final Exam covering all topics (Chapters 1,2,3,4,5,6,F) TBD** | | | |

## Course Requirements and Grading

**Summary of Course Grading:**
Course grades will be calculated as follows:
WebAssign: 15% with 2 lowest homework scores dropped
Midterm Exams: 20% each (60% total)
Final Exam: 25%
Extra Credit: Homework completed at least 24 hours will earn a 5% boost to that assignment's score. **Lowest midterm score will be replaced by the final exam score, if it is higher. The final exam will not be replaced.**

**SET SURVEY BONUS:** If the class completion rate for the SET survey during the last week of classes reaches 60% completion, I will drop an additional 2 homework scores. This means your lowest 4 homework scores will not count towards your final grade.

### Exams

There will be 3 midterm exams held during the semester, plus a cumulative final exam. Exams will be held online on HuskyCT and y**ou must use Respondus Lockdown Browser**. This is an online proctoring tool that requires a working webcam and microphone that will record your exam session. You must download Lockdown Browser before taking the first exam. After that, you can simply click on the link in HuskyCT and Lockdown Browser will open automatically. Lockdown Browser is required to verify your identity for the online course as per university policy. **If you have questions about how to download or use Lockdown Browser you can visit the** UConn Knowledge Base Lockdown Browser Page. You can also complete the practice assignment to get a feel for what exams in Lockdown Browser will look like.
On the day of the exam, you can access the exam online any time **from 9am to 9pm**. Once you start the exam, you have **2 hours to finish. You have only 1 attempt, so make sure your answer is correct before you click "Next" button.**

You may use ONE PAGE of notes (front and back) for the exam and you may use a calculator (**NOT your phone**). You will also be allowed to access www.desmos.com to use the calculator if you prefer. Exam questions will appear one at a time in random order, and you must answer each question before moving on to the next – backtracking is not allowed.
Practice tests are posted on HuskyCT and correspond to individual units (from a previous version of the course). Please use the practice test to review the material and the exam format. You may retake the practice test as many times as you'd like. **The practice tests are for practice** and **do not count in your average.**

Exam scores will be released on HuskyCT after the exam window ends, you may access your prior exams in HuskyCT after all grades are posted for that exam. More information about using HuskyCT and setting up the

mobile app can be found in the Student Technology Guide: HuskyCT.

## Grading Scale

| Grade | Letter Grade | GPA |
|---|---|---|
| 93-100 | A | 4.0 |
| 90-92.99 | A- | 3.7 |
| 87-89.99 | B+ | 3.3 |
| 83-86.99 | B | 3.0 |
| 80-82.99 | B- | 2.7 |
| 77-79.99 | C+ | 2.3 |
| 73-76.99 | C | 2.0 |
| 70-72.99 | C- | 1.7 |
| 67-69.99 | D+ | 1.3 |
| 63-66.99 | D | 1.0 |
| 60-62.99 | D- | 0.7 |
| <60 | F | 0.0 |

## Due Dates and Late Policy

WebAssign's automatic extension policy: You may request an extension up to **72 hours** after the due date with no penalty. Once you request an extension, you have only **24 hours to finish the late homework**. **Two lowest WebAssign scores will be dropped.**

No exam extensions will be allowed without significant extenuating circumstances or official Dean of Students approval. You must email me at l**east 24 hours before the exam starts**. Any requests made the day of the exam are not likely to be approved. **Please set reminders on your phone at the beginning of the semester to ensure you do not miss any exam deadlines.**

## 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

## Additional Resources for Students in Distress

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional

growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.
Students who feel they may benefit from speaking with a mental health professional can find support and resources through the Student Health and Wellness-Mental Health (SHaW-MH) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.
Mental health services are included as part of the university's student health insurance plan and also partially funded through university fees. If you do not have UConn's student health insurance plan, most major insurance plans are also accepted. Students can visit the Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor, or contact the office at (860) 486-4705, or https://studenthealth.uconn.edu/ for services or questions.
Here are some helpful links: Dean of Students Office, Academic Achievement Center, Writing Center, Quantitative Learning Center, Center for Students with Disabilities, Title IX Office, Student Health and Wellness — Mental Health

## Students with Disabilities and Accommodations

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 accommodation should contact the Center for Students with Disabilities**, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Student Athletes and Students with Disabilities should inform your instructor of your commitments as an athlete, any special needs that you have, etc. within the first three weeks of the semester. You will be expected to have a letter from the Athletics Department or the Center for Students with Disabilities.

The University Senate passed a motion on about religious observances which stipulated that Students anticipating such a conflict should inform their instructor in writing within the first three weeks of the semester, and prior to the anticipated absence, and should take the initiative to work out with the instructor a schedule for making up missed work. For conflicts with final examinations, students should, as usual, contact the Dean of Students.