

# MATH 1070Q: Mathematics for Business and Economics

## CAPS/SSS Summer 2026

### Instructor Information

Name: Dion Mann  
Email: [dion.mann@uconn.edu](mailto:dion.mann@uconn.edu)  
Office: MONT 213  
Office Hours: 15:00 – 16:30 (Monday & Tuesday)  
Math CAPS/SSS Coordinator: Caylee Spivey

### Class Information

Course Website: [dionmann.github.io/math1070](https://dionmann.github.io/math1070)  
Dates: 29 June 2026 – 30 July 2026 (MTuWThF)  
Time: 08:00 – 09:50  
Classroom: SHH 105

### Course Description

This 3-credit course is an introduction to the basic mathematics needed for business and economics, covering linear equations and inequalities, matrices, systems of linear equations, linear programming, sets, counting, probability, statistics, and applications to business and economics. *Recommended preparation: MATH 1011Q or equivalent. Not open for credit to students who have passed MATH 1132Q, 1152Q or 2142Q.*

### Course Objectives

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

1. Understand the basics of sets: Set operations, Venn diagrams, and applications.
2. Understand probability concepts: Calculate probabilities, conditional probabilities, and apply Bayes' theorem.
3. Understand combinatorial concepts: Use the counting principle, permutations, and combinations to solve problems.
4. Analyze Bernoulli trials.
5. Understand Random Variables and Distributions: Calculate expected values and variances.
6. Perform financial calculations: Calculate simple and compound interest, and analyze credit card payments and consumer loans.
7. Develop mathematical models for business and economics: Use linear equations, inequalities, and systems of equations to model real-world problems.
8. Analyze systems of linear equations: Use Gaussian elimination and other techniques to solve systems of equations.
9. Work with matrices: Perform matrix operations and apply matrices to solve problems in business and economics.

## Course Materials

E-Textbook: *Contemporary Mathematics* via [openstax.org](https://openstax.org). This is a free, open-source textbook.

## Instructor Expectations

Here is what you can expect from me:

1. I respond to emails as soon as possible, but you may not see a response the later it gets into the night (unless I am still awake).
2. Apart from the scheduled office hours, I am open to appointments. If you want to meet with me, please email me to set up a time. I will do my best to accommodate your schedule.
3. I created an **anonymous feedback form** which you may find in the course webpage (<https://dionmann.github.io/math1070>). You can use this form to provide feedback about the course at any time or ask any questions in which you want to remain anonymous.

## Course Expectations

In the previous section, I described how I will do my best to accommodate your needs. Here is how you can make this easier:

1. Please come to class: attendance for CAPS/SSS is mandatory.
2. Please participate in class: you are not expected to answer all my questions, but I do expect you to try some of them. Although answering questions correctly is impressive, I am more interested in your mistakes so that I can better understand your thinking and modify the direction of the lecture. Make mistakes in class so that you do not make mistakes on the graded assessments.
3. Like any other skill, the only way to learn is by doing. It is essential that you complete all course assignments to master the material, which is why your grade depends on it.

## Grading and Assignments

Your course grade is determined by the following components:

|            |     |
|------------|-----|
| Topics     | 60% |
| Worksheets | 20% |
| Final      | 20% |

with final grades being assigned according to the following scale:

|     |          |     |         |
|-----|----------|-----|---------|
| A   | 93 – 100 | C   | 73 – 76 |
| A – | 90 – 92  | C – | 70 – 72 |
| B+  | 87 – 89  | D+  | 67 – 69 |
| B   | 83 – 86  | D   | 63 – 66 |
| B – | 80 – 82  | D – | 60 – 62 |
| C+  | 77 – 79  | F   | 0 – 59  |

- **Topics (60% of Grade)**

The style of instruction is based on “Second Chance Grading” due to Oscar E. Fernandez ([doi.org/10.1080/10511970.2020.1772915](https://doi.org/10.1080/10511970.2020.1772915)). You will be graded on each **Topic**, the grade of which will be the maximum of your score between the topic’s quiz and the Second Chance exam (see *Quiz* and *Second Chance Exam/Quiz* below). Each day (except Monday) covers one topic, for a total of 16 topics by the end of the program. Each topic is graded out of 20 points. *Summary:* For each topic, you will have two chances to get graded (one from the quiz, and one from one of the “Second Chance” assessments).

*Quiz.* Quizzes will be administered every Wednesday, Thursday, and Friday (**except for week 1; see schedule**) at the beginning of lecture and are 20 minutes long. They will test the topic from the previous day (e.g., a Wednesday quiz will test Tuesday’s topic). There are 4 questions in each quiz, each worth 5 points, making the quiz worth 20 points.

*SC Exam.* A “second chance” exam (SC exam) will be administered weekly on Monday (except for the first day of class) and are 80 minutes long. There are two parts to the exam. Part I is a quiz which will test the previous Friday’s topic. Part II will consist of alternate questions from the previous Tuesday, Wednesday, and Thursday topics. There is no single “exam grade”; you will obtain 4 different grades (1 for each topic, each out of 20 points)

*SC Quiz.* A “second chance” quiz (SC quiz) will be administered weekly on Tuesday for the topic covered in Part I of the SC Exam on Monday. The SC quiz is the same format as the regular quiz, just with alternative questions for the topic.

- **Worksheets (20% of Grade)**

Worksheets will be administered every day except Monday (exam day) during the last 20 minutes of class as an “exit ticket.” Each worksheet is designed for practicing the material learned in lecture during the same day. They will be similar to quizzes in that they will have 4 questions—each worth 5 points—with the difference being that grading is by completion, not correctness. The completion grade for each question will scale with how much work is written down (i.e., a half-way answer will be given 2-3 points, and a full but possibly incorrect answer will be given the full 5 points).

- **Final Exam (20% of Grade)**

There will be a cumulative final exam. The exam will **only** draw problems from previous quizzes, second chance exams, worksheets, and the homework sets. You will be allowed a calculator.

- **Homework: Practice Problems (optional)**

At the beginning of the week, I will provide practice problems for that week’s material as homework. This homework is entirely optional, but the quizzes, second chance exams, and final may draw from these problems.

### **Make-up Policy and Extra Credit**

Due to the fast-paced nature of the CAPS/SSS program, there are no make-ups for assessments. Instead, I will base your grade only on 15 topics (out of 16 topics), with any remaining points from the extra topic being considered extra credit.

## **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/>. To provide students with disabilities the appropriate accommodations, CSD must send an official letter to your instructor.

## **Academic Honesty and Artificial Intelligence Policy**

This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. UConn defines academic misconduct as “dishonest or unethical academic behavior that includes, but is not limited to, misrepresenting mastery in an academic area (e.g., cheating), failing to properly credit information, research, or ideas to their rightful originators or representing such information, research, or ideas as your own (e.g., plagiarism).” Visit this site for more information: <https://policy.uconn.edu/2023/07/11/academic-scholarly-and-professional-integrity-and-misconduct-aspim-policy-on/>.

Generative AI and large language models (LLMs)—for example: ChatGPT, Gemini, and Copilot—aggregate the ideas and insights of many researchers without giving them credit. Submitting AI-generated text, images or other work as your own work would be an act of plagiarism insofar as it would involve passing off the work of others as your own. The use of generative AI is not allowed to complete any in-class activities, homework assignments, or exams. Any work that you submit during this course is meant to show your knowledge, understanding, and effort in this course. Instead of utilizing an AI tool to complete your work, I ask that you rely on the resources being provided to you during this program: myself as your instructor, the breakouts/tutoring sessions each evening, and peer interactions within class and during study hours.

## **Resources for Students Experiencing 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 located in Storrs on the main campus in the Arjona Building, 4th Floor. 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 partially funded through university fees. If you do not have UConn’s student health insurance plan, most major insurance plans are also accepted. Please visit <https://studenthealth.uconn.edu/> or call (860) 486-4705 if you have questions.