Math 1070Q – UConn at Stamford - Fall Semester 2026 – Mathematics for Business and Economics – Room 134, Tuesdays and Thursdays 5:30 pm – 6:45 pm

Instructor: Cristiano Husu, cristianohusu@sbcglobal.net, 203 329 0489, cristiano.husu@uconn.edu, Office Number 334, Webex room crh02006.

OFFICE HOURS at the end of each class

on Mondays, from 3:05 pm to 3:35 pm, room DWTN 132,

on Tuesdays, from 4:45 pm to 5:30 pm, room DWTN 108 and/or room 134,

on Wednesdays, from 3:05 pm to 3:35 pm, room DWTN 132,

on Thursdays, from 4:45 pm to 5:30 pm, room DWTN 108 and/or room 134,

Additional office hours by appointment schedule at the end of classes.

Textbook. Detailed lecture notes with homework problems (included in the lecture notes) written by the instructor will be available before each class on huskyct.uconn.edu or, optional, students can use the book of E. Tomastik, Applied finite Mathematics.

Course Description: Systems of Linear Equations and Inequalities, Matrices and Determinants, Linear Programming, Counting and Probability, Basic Financial Mathematics.

Prerequisites: MATH 1010 or equivalent.

Homework samples will be collected every two weeks. Classwork to review previously assigned material will take place at the end of some classes.

Grading Procedure: The course grade of each student will be determined by the sum of the following four numbers.

1) The number of points of the student's first examination, a number between zero and 20 points (as the first 20% of the course grade),

2) The number of points of the student's second examination, another number between zero and 20 points (as the second 20% of the course grade),

3) The number of points of the student's for classwork (class participation, speaking, reading and writing about number skills, algebraic display of information, visual, geometric and analytical reasoning) and homework, another number between zero and 20 points (as the third 20% of the course grade),

4) The number of points of the student's comprehensive final examination, on a date TBA, the remaining 40 points (as the remaining 40%. of the course grade).

Letter grades, A, B, C, D, F, will be the result of the following standard grading calculation:

grade A *corresponding to a total above 90 points,*

grade B *corresponding to a total between 81 and 90 points,*

grade C *corresponding to a total between 71 and 80 points,*

grade D *corresponding to a total between 61 and 70 points,*

grade F *corresponding to a total below 61 points*

No make-up examinations without proof of extenuating circumstances. (If you miss an examination, you will have to prove extenuating circumstances to the Office of the Dean of Students. If approved by the Office of the Dean of Students, you can be rescheduled the examination and/or extra work that will take the place of the missed examination.)

Note that, if you miss the final examination without a timely proof of extenuating circumstances, you will not reach the minimum number of points, 61, to receive a D grade, and, consequently, your course grade will be an F.

A daily description of the course follows in the rest of the syllabus.

Week 1. September 1, 2026. Lecture notes 1: Mathematical Models. Systems of Linear Equations (sections 1.1 and 1.2 of the E. Tomastik book)

September 3. Lecture notes 2: *The Gaussian Elimination* (section 1.3 of the E. Tomastik book).

Week 2. September 8. Lecture notes 3 and 4: Overdetermined and Underdetermined Systems of Linear Equations (*Systems of Linear Equations with Non-Unique Solutions*). The Method of Least Squares. (Sections 1.4 and 1.5 of the E. Tomastik book.)

September 10. Lecture notes 5 and 6: Matrices. *Matrix Multiplication.* (Sections 2.1 and 2.2 of the E. Tomastik book.)

Week 3. September 15. Lecture notes 7: *Inverses of Nonsingular Square Matrices.* Applications. (Sections 2.3 and 2.4 of the E. Tomastik book.)

September 16+1. Lecture notes 8: *Linear Programming*. (Section 3.1 of the E. Tomastik book.)

Week 4. September 22. Lecture notes 9: *Graphing Linear Inequalities.* (Section 3.2 of the E. Tomastik book.)

September 25: *Review for the first examination on systems of linear equations, the Gaussian Elimination, matrix multiplication, inverses of a square matrices and linear programming.*

Week 5. September 29. Lecture notes 10: *Solutions of Linear Programming.* (Section 3.3 of the E. Tomastik book.)

October 1: *First examination on systems of linear equations, the Gaussian Elimination, matrix multiplication, inverses of a square matrices and linear programming.*

Week 6. October 6. Lecture notes 11: Sets. Venn diagrams. The De Morgan laws. *Number of Elements in finite sets*. (Sections 4.1 and 4.2 of the E. Tomastik book.)

October 8. Lecture notes 12: *Sample Spaces. Events*. (Section 4.3 of the E. Tomastik book.)

Week 7. October 13. Lecture notes 13 and 14: *Basic Probabilities. Mathematical probabilities. Empirical probabilities Odds*. *Rules of Probability*. (Section 4.4 of the E. Tomastik book.)

October 15. Lecture notes 15: *Conditional Probability*. (Section 4.6 of the E. Tomastik book.)

Week 8. October 20. Lecture notes 16: Bayes Theorem. (Section 4.7 of the E. Tomastik book.)

October 22. Lecture notes 16+1: *The Multiplication Principle. Permutations*. (Section 5.1 of the E. Tomastik book.)

Week 9. October 27. Lecture notes 18: *Combinations*. (Section 5.2 of the E. Tomastik book.)

October 29. Lecture notes 19: Expected value. Bernoulli's trials.

Week 10. November 3. Lecture notes 20: Newton's Binomial Theorem.

November 5: *Review for the second examination on number of elements in finite sets, sample spaces, events, basic probability, odds, conditional probability, permutations and combinations.*

Week 11. November 10. Lecture notes 21: Simple Interest. (Section F.1 of the E. Tomastik book.)

November 12: *Second examination on number of elements in finite sets, sample spaces, events, basic probability, odds, conditional probability, permutations and combinations.*

Week 12. November 16+1. Lecture notes 22: *Compound Interest*. (Section F.2 of the E. Tomastik book.)

November 19. Lecture notes 23: *Annuities*. (Section F.3 of the E. Tomastik book.)

Week 13. November 24 and 26: *Thanksgiving recess.*

Week 14. December 1. Lecture notes 24: *Amortizations*.

December 3: **December 8.** *Review for the comprehensive final examination.*

Week 15. December 8. *Additional work on solving linear programming problems.* (Section 3.3 of the E. Tomastik book.)

December 10: *Further review for the comprehensive final examination.*

(On a date and time announced by the Registrar Office during the month of October, the comprehensive Final Examination.)

The Registrar Office has announced the final examination date:

Tuesday, December 9, 2025, from 6 pm to 8 pm in room 108.