# MATH 1071Q
# Calculus for Business and Economics.
# Spring 2022

## Syllabus

- **Instructor:** Igor Ferdman
- **Format:** In person
- **Class Meeting Times:** Wednesday 4:00 p.m. – 6:30 p.m
- **Office Hours:** Monday and Wednesday 3:00 p.m – 3:50 p.m. and by appointment
- **Office:** 504
- **Course Description:** This course is an introduction to calculus and applications designed primarily for students majoring in business, economics, or the life and social sciences. We will cover essential concepts of differential and integral calculus.
- **Email:** igor.ferdman@uconn.edu
- **Textbook:** Calculus, Applications and Technology (Custom Package) by Edmond Tomastik (bounded WebAssign access code). Edition: 09. Publisher: CENGAGE

**Mask and Social Distancing Expectations**

Until further notice, to ensure a safe learning environment for everyone, masks/face coverings must be worn at all times when inside buildings, including in the classroom, regardless of vaccination status. If a student is not wearing a mask/face covering, they will be asked by the instructor to put one on immediately or leave the classroom. Repeatedly failing to follow this expectation will result in a referral to Community Standards. No eating is permitted in the classroom; brief unmasking to drink is permitted. For any other activities that require unmasking, please leave the classroom. If an instructor is not wearing a mask/face covering, students should feel comfortable asking the instructor to put one on immediately. More information about proper usage of masks is available from UConn Environmental Health and Safety at this link.

- **Course Objectives.**

1. Use mathematical models to represent various business and economics related functions, including cost, revenue, profit, and demand.
2. Understand and work with exponential and logarithmic expressions, especially as related to interest and other exponential growth problems.
3. Understand the idea of a limits and limits at infinity. Evaluate various types of limits and define concepts like asymptotes, continuity and derivatives in terms of limits.
4. Understand the derivative as the instantaneous rate of change and also the slope of the tangent line to a curve. Use the tangent line to approximate functions.
5. Evaluate the derivative of functions using standard derivative rules.
6. Understand elasticity of demand.
7. Use the first and second derivative of a function, as well as its properties like domain, asymptotes and symmetry, to understand the overall shape of a function and draw its graph.
8. Setup and solve optimization and related rates problems in various contexts, using derivatives.
9. Evaluate both indefinite and definite integrals, using basic antiderivative rules, including substitution. This includes developing an understanding of the Fundamental Theorem of Calculus.
10. Use integrals/antiderivatives to solve problems, like finding cost from marginal cost, net change from a rate of change, or the area under or between curves.

- **Exams and quizzes:** There will be 2 midterm exams and a comprehensive final exam. Final exam will be held in regularly scheduled classroom unless otherwise notified by instructor. All work must be shown. An answer without an explanation is not worth any credit. All exams will be closed notes and closed book. One handwritten index card is allowed on exams. There will be no make-ups for missed work unless of justified and well documented circumstances. I reserve the rights to refuse a makeup exam.
- Throughout the semester, we will be having quizzes. I will outline the dates when they will be given.

  Anticipated coverage on Exams:

  **Covered on Exam 1: A1, A2, A6, 1.1 -1.5, 3.1, 3.2, 3.3.3.4**
  **Covered on Exam 2**: **4.1-4.5, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6**
  **Covered on Final Exam**: all the above and **6.1, 6.2, 6.4, 6.5, 6.6.**

- **Online Homework.** Online homework is assigned and completed using WebAssign. To access your homework online you must go to Husky CT. Please note that many students have experienced problems using WebAssign with Internet Explorer or Safari. We recommend that you use Firefox or Chrome.
  You will have **two weeks of free access** to WebAssign which includes an e-book, so you can get started right away in case you need some time to arrange to buy textbook with the access code.

- **Worksheets.** You are encouraged to work together on these worksheets, but each student needs to submit their own work and understand what they are submitting. You may be asked to explain what you've written on any assignment and should be able to fully explain any work submitted as your own.

- **Due dates:** All due dates for WebAssign are identified in the WebAssign. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

- **Grading:**
  Minimum averages have been established for each of these grades:
  **A 93% A– 90% B+ 87% B 83% B– 80% C+ 77% C 73% C– 70% D+ 67% D 63% D– 60%**

  To assign grades, I will form a weighted sum of all the grades you receive throughout the semester. The weighting will be:

  | | |
  |---|---|
  | Midterm exams – | 15% each |
  | Quizzes – | 15 % |
  | Worksheets - | 15 % |
  | Homework assignments – | 25% |
  | Final exam – | 20% |

  There will be a curve used in determining grades. Individual items (exams and worksheets) will be curved separately. This curve will be influenced mostly by the class performance as a whole. Overall course grades will **not be curved.**

- **Expectations:** Students are expected to attend all classes. Before each class, you should both review the material from recent sections and read the sections to be discussed that day. This will allow you to understand the presentation of new material. If you must miss a class, I expect you to find out what happened, either from me, or one of your classmates. You are expected to put in at least 2 hours of work outside of class for every

hour in class. Class participation is an important part of the classroom experience.

- **Special notes**
  - Students are not allowed to leave the room and then return while taking a test or exam unless permission is explicitly granted by the instructor. In the case of an emergency, please check with the instructor.
  - We will use frequently TI-83 Plus graphing calculator in class.
  - If you feel there was an error in grading or something is unfair, feel free to discuss it with me after class.

- **Absences from Final Examinations.** A student who is prevented by sickness or other unavoidable causes from completing a scheduled final assessment must apply to the Dean of Students or designee for validation that will authorize the student's instructor to give a substitute assessment. A student whose absence is excused by the Dean of Students or designee shall have an opportunity to complete a substitute assessment without penalty. A student whose absence from a scheduled final assessment is not excused in this way shall receive a failure for this assessment.

- **Rescheduling Final Examinations**

  Students should check their final examination schedule to see if they have either:

  a) four examinations in two consecutive calendar days
  b) three examinations in one calendar day
  c) three examinations in consecutive time-blocks spanning parts of two consecutive days

  If any of the above apply, they may request the Dean of Students Office to rearrange their schedule. The Dean of Students Office will select one of the examinations for rescheduling and notify the instructor, usually with a letter given to the student.

## How to Succeed in this Course

All students can succeed in this course, and we are here to help you along the way. Please do not hesitate to ask questions or attend office hours. All questions are important here. Success in this course program depends heavily on your personal health and well-being. Recognize that stress is an expected

part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. Your teaching assistants and I strongly encourage you to reframe challenges as an unavoidable pathway to success. Reflect on your role in taking care of yourself throughout the semester, before the demands of exams and projects reach their peak. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in your courses or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

**People with Disabilities.**

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 accommodations should contact the Center for Students with Disabilities, (860) 486-2020, or http://csd.uconn.edu/.

**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 Inappro