UCONN
UNIVERSITY OF CONNECTICUT

MATH 1071Q
Mathematics for Business and Economics

Syllabus - Summer Session 2, 2024

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: Calculus for Business and Economics
Credits: 3
Format: ONLINE (WW) Asynchronous
Prerequisites: Recommended preparation: MATH 1011Q or the equivalent, and MATH 1070Q, and a qualifying score on the math placement assessment (placement.uconn.edu/mathematics-placement). Not open to students who have passed MATH 1110Q. Only one credit for students who have passed MATH 1121Q, 1131Q, or 1151Q.
Professor: Katie Hall
Email: katie.hall@uconn.edu
Office Hours/Availability: There will be office hours several days a week. Specific times will be set the week before classes start and might be adjusted throughout the semester to reflect the needs of students. You can find them in the Welcome and Overview section of HuskyCT.

Course Materials

The course textbook is:
OpenStax Calculus Volume 1: UConn Custom Business Calculus Edition. Available here: https://www2.math.uconn.edu/ClassHomePages/Math1071/Textbook2

Students must have access to a computer and webcam to use Lockdown Browser for exams and a way to submit PDFs of handwritten work.

Course Description

Derivatives and integrals of algebraic, exponential and logarithmic functions. Applications to business and economics.

Course Objectives

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

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 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.

Course Outline

Module 1: Chapter 1: 1.1-1.8
Module 2: Chapter 2: 2.1-2.4
Module 3: Chapter 3:3.1-4, 3.6, 3.9
Module 4: Chapter 4, 4.1-4.3, 4.5-4.8
Module 5: Chapter 5: 5.1-5.3, 5.5

Schedule

Week/Dates	Module	Monday	Tuesday	Wednesday	Thursday	Friday
1: July 8-July 14	1	1.1, 1.2 Wkst 1 Due	1.3,1.4 Wkst 2 Due	1.5, 1.6	1.7, 1.8 Wkst 3 Due	Review
2:July 15-July 21	2	**Test Ch 1**	2.1, 2.2 Wkst 4 Due	2.3	2.4 Wkst 5 Due	Review
3: July 22-28	3	**Test Ch 2**	3.1,3.2 Wkst 6 Due	3.3,3.4	3.6,3.9 Wkst 7 Due	Review
4: July 29-August 4	5	**Test Ch 3**	4.1,4.2, 4.3 Wkst 8 Due	4.5,4.6	4.7,4.8 Wkst 9 Due	Review
5: August 5-August 9	6	**Test Ch 4**	5.1, 5.2 Wkst 10 Due	5.3,5.5	Review Wkst 11 Due	**Final Exam (Cumulative)**

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
Online Homework	20%
Worksheets	20%
Tests	40%
Final Exam	20%

Online Homework
Online homework for MATH 1070Q is assigned and completed using HuskyCT. Questions are built directly into HuskyCT. There is no extra charge or access code required. Online homework is due 11:59pm on Sunday nights. The recommended completion dates are listed above. You have unlimited tries, but you must submit all problems on each try and you get different problems each try. Your score is based on your highest attempt. Late homework is accepted (up to 1 week late) with a 20% penalty.

Worksheets
There are about two worksheets due each week. Suggested completion dates are given above but all worksheets must be submitted by 11:59pm on the Sunday after the material is covered. Your homework 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 Gradescope. 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 rubric provided in HuskyCT.

Tests
There is a test on the previous week's material each Monday. Each test 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 tests are open from Friday (or earlier) through Monday for those students who want to take it earlier.

Final Exam
The final exam will be on Friday, August 9. It will be proctored. It requires Lockdown Browser with Respondus

Monitor (WebCam Required). You may use an unlimited number of pages of notes. You will also have access to Desmos.com. Now other resources are allowed. The final exam will be open on August 8 and 9.

Test Retakes
You may choose to retake any TWO of the weekly tests. The score on the retake will replace the score on the first try of that exam, if higher. All retakes must be completed by 11:59pm on August 9.

Grading Scale
Undergrad

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

All course due dates are identified in the table above. Specifics will be given in HuskyCT. Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submission times accordingly. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated appropriately.

Feedback and Grades

I will make every effort to provide feedback and grades within 4 days of when an assignment is due. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Weekly Time Commitment

You should expect to dedicate 25.2 - 33.6 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 weekly tests and the Final Exam 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. 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, 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:

- 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
- Ability to scan handwritten work in as a PDF (apps like CamScanner are acceptable)

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 is completely facilitated online using 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.
- Create PDF files of handwritten work.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information..

Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.