MATH 1071Q – 325/326 **Winter 2025**

Calculus for Business and Economics **12/30/2024 to 1/17/2025**

Please note that the content of this syllabus, except required course materials, are subject to change by 12/30/2024.

Instructor: Dr. Vindya Pathirana

Let me introduce myself to you:



I earned my Ph.D. in Mathematics from the University of South Florida in August 2015, a year before joining UConn Waterbury. My research interests include Mathematical Finance, Probability and Statistics, Data Analysis, Pattern Recognition through Machine Learning, Statistical Learning, and Decision-Making. I have had a passion for helping my younger siblings, friends, and peers with their math struggles since I was young. When I look back, I can now understand why I am a MATH professor today. I realize that my love for Mathematics stems from my ability to find beauty in things that are not visible to the naked eye. That might also be the reason for my fondness towards music.

I hold honor, honesty, and integrity in high regard. I strongly believe that every strength has a corresponding weakness, and every weakness presents an opportunity for growth. Achieving balance in life requires managing both.

How can you contact me?	How can you meet with me? **Online**	Class Format:	How can you access class materials?
Dr. Vindya Pathirana (Dr. V) vindya.pathirana@uconn.edu	**Monday – Friday 4:00 pm – 6:00 pm** *****except on exam days***	**Online Asynchronous**	**Online on HuskyCT**

Important!

- *As this course is offered in the online-asynchronous format, there won't be scheduled meeting times/days.*
- *You will have access to the course materials, including lecture notes, lecture recordings, and workout example recordings online in **HuskyCT**.*
- *All times for due dates (Exams, Worksheets, & Quizzes) and online office hours in this course are given in **US Eastern Time (EST)**.*
- *Success in this course is dependent upon the amount of time and effort spent working through the homework to understand the material not the time and effort spent memorizing and imitating examples.*

How will the Lectures be Delivered?

All course instructions will be delivered remotely and asynchronously. You will have access to the course materials, including lecture notes, lecture recordings, and workout example recordings online on HuskyCT. The online videos can be watched anytime convenient, but I strongly urge you to watch them during the week they are listed on the Course Schedule.

How Can I Communicate with the Instructor?

Announcements and essential course information will be sent via your official UConn email or through HuskyCT, UConn's learning management system. It is the student's responsibility to check messages and announcements daily. This is particularly important for transfer/nondegree students, so please check your UConn email account regularly.

Students should communicate with the instructor via email or through the Campuswire Discussion Board (a link will be provided at the start of the semester on HuskyCT). All questions related to course content should be posted on the discussion board. You can ask general questions about the course material on Campuswire, and I will respond so that everyone can benefit from the Q&A.

What will You Learn in This Course?

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.

What is the Recommended Prerequisite?

MATH 1011Q or the equivalent, and MATH 1070Q, and a qualifying score on the math placement assessment. Not open to students who have passed MATH 1110Q. Only one credit for students who have passed MATH 1121Q, 1131Q, or 1151Q. (Undergraduate Catalog). *It is assumed that the students have a working knowledge of the recommended preparation materials. Students are strongly encouraged to ask questions during instructor office hours, using campuswire discussion board, and via e-mail.*

What is the Expected Weekly Time Commitment?

This course moves quickly! Since it is condensed into three weeks instead of the usual fifteen, you can expect the content to progress five times faster than during a regular semester. It is essential to keep up with the material, and please don't hesitate to use me as a resource and guide throughout the course.

What are the Required Materials?

Textbook:

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

- Note that this book is a custom edition based on OpenStax Calculus Volume 1.
- You can download the original for free at https://openstax.org/details/books/calculus-volume-1.

What Topics will be Covered?

Chapter 1 – Functions and Graphs:	**1.1 – 1.8**
Chapter 2 – Limits:	**2.1 – 2.4**
Chapter 3 – Derivatives:	**3.1 – 3.4, 3.6, 3.9**
Chapter 4 – Application of Derivatives:	**4.1 – 4.3, 4.5 – 4.8**
Chapter 5 – Integration:	**5.1 – 5.3, 5.5**

What digital technology tools and equipment will you need for this course?

Most of the course assessments (Exams and worksheets) will require you to upload a pdf of your work. For this, you will need access to a device that will allow you to scan and save your work as a pdf document, such as a scanner or scanner app on a smartphone. The software/technical requirements for this course include:

- HuskyCT/Blackboard access.
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).
- Respondus Lockdown Browser (install it through Blackboard)
- All proctoring will require the use of a webcam.

Minimum Technical Skills -

- 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 and videos.

It is recommended (not mandatory) that you take Student Technology Training - a video training for students available on HuskyCT Institution page under "Useful Links for Students".

Can I use my Cell Phone?

Cell phones cannot be used as calculators. All cell phones must always be turned off and kept out of sight during exams.

Can I Use a Calculator?

Scientific and/or certain graphing calculators will be allowed on worksheets, quizzes, midterm, and the final.

- The TI-82, 83, 84, 84 plus, 85 or 86 models are recommended but not required.
- Calculators that can perform symbolic computations, such as models TI-89 and above, including TI-Nspire will **not** be permitted on exams or quizzes.

Although calculators are allowed, you must show all work on any written assignments (exams & worksheets).

What is the Course Schedule?

The course consists of two modules, each covering specific topics. The course calendar (with topics for each day of the semester) will be available on HuskyCT on the first day of the semester.

Module 1: Functions, Limits, and Intro to Derivatives

- **Dates:** December 30th to January 9th
- **Sections covered:** 1.1 – 1.8, 2.1 – 2.4, 3.1 - 3.4, 3.6, 3.9
- **Worksheets DUE:** Wednesday, January 8th @ 11:59 p.m.
- **Midterm Exam:** Thursday, January 9th

Module 2: Applications of Derivatives and an Intro to Integration

- **Dates:** January 10th to January 17th
- **Sections covered:** 4.1 – 4.8, 5.1 – 5.5
- **Worksheets DUE:** Thursday, January 16th @ 11:59 p.m.
- **Final Exam:** Friday, January 17th **CUMULATIVE

Will an Exam Review Be Provided?

Each exam will have a review with questions similar to the actual exam format. Exam reviews will be made available ahead of each exam. It is highly recommended that you complete the review to help prepare for the course exams.

Will There be Any Extra Credit Opportunities?

Some extra credit questions may be available on each exam. All extra credit opportunities will be offered to the entire class. Extra credit assignments will not be available for individual students at any time.

How will I be assessed on this course?

Exams (65%):

There will be *2 exams* given during the semester.

Midterm Exam – Sections 1.1 – 1.8, 2.1 – 2.4, 3.1 - 3.4, 3.6, 3.9 **- Thursday, January 09**
Final Exam – CUMULATIVE **- Friday, January 17**

All exams will be timed and proctored remotely. The midterm exam will include both multiple-choice and written answer questions. The final exam will consist solely of written answer questions. To receive full credit, you must show your work for written answer questions. Additional information will be provided in a separate document on the first day of the semester.

Online Worksheets (15%):

For all sections covered (with few exceptions), there will be an associated worksheet given online via Gradescope, which is linked with the HuskyCT section. You are allowed to use your notes and textbook and also allowed to discuss with each other when completing an online (accessed through HuskyCT) worksheet. During a worksheet, using any other technology (search online, etc.) will be considered academic misconduct.

The 3-lowest grades will be dropped, so there's no need for make-up worksheets. If you miss a worksheet for some reason, you can consider it as one of the dropped ones.

- ✓ *Please see the course calendar for due dates & sections for worksheets.*
- ✓ *Completing worksheets without your notes/textbook can be beneficial for you during exams.*

Important!

- *For all handwritten assessments, please note that all work must be shown.*
- ***NO WORK = NO CREDIT***

Participation (20%):

As part of your participation grade, you are required to

(i) complete daily check-in quizzes posted on Campuswire.
(ii) interact with your peers and instructor through an online discussion board and/or virtual office hours.

You must earn 25 participation points during the semester to receive full credit for participation. Points can be earned in the following ways:

Daily Check-in Quizzes: According to the suggested course schedule, a short quiz (not timed or proctored) will be posted on campuswire each day from the content is assigned. Each quiz consists of 1-

2 questions and is worth 2 points. The quizzes may include multiple choice, true/false, and short answer questions. You do not need to show your work for these quiz problems. This amounts to a maximum of 20 total points within your participation score.

Office Hour Attendance: You can earn the remaining points by actively participating in office hours and interacting on campuswire discussion board/class feed (asking and answering questions). Each active participant will earn 2 points per session during office hours. Interaction points are capped at 6 per week.

Note: ***There will not be office hours or check-in quizzes on exam days.***

Grading Breakdown:

EVENT	PERCENTAGE
Final Exam	35%
Midterm Exam	30%
Worksheets	15%
Participation	20%
Total	**100%**

Grading Policy:

The plus/minus grading system will be used. If your overall percentage of total points falls into the following range, you will receive the corresponding grade:

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

Exam, Quiz, and Worksheet Policies

Make-Up/Late Policy

There will be no make-up and no extensions for any form of assessment (exams, worksheets, etc.). Only extreme situations with an officially documented excuse will allow you to make up an assignment.

What Happens If I Miss an Exam?

If you have an approved reason for being unable to take an exam at its scheduled time, you must notify me in advance to make arrangements.

Students who cannot take an exam due to an emergency should email their instructor as soon as possible and within 24 hours. Arrangements for a make-up exam will be considered on a case-by-case basis and will be administered solely at the instructor's discretion.

If you are permitted to take a make-up exam, it must be done at a mutually agreed-upon time. No additional opportunities will be granted after this. Please note that make-up exams may incur a penalty of up to 10% of the earned grade, depending on the reason for the make-up. Failure to contact the instructor as stated will result in a grade of zero for the exam. This policy applies only to the first missed exam. Repeated offenses will be reviewed on a case-by-case basis but generally will not be allowed to be made up.

Please note that employment schedules, vacations, previously purchased tickets or reservations, graduations, social events (family reunions, etc.), misreading the assessment schedule, and oversleeping are not viable reasons for rescheduling an exam.

What Happens If I Miss a Daily Check-in Quiz?

Quizzes will be administered online, and you will have 24 hours to complete each. Please be aware that no makeup quizzes will be offered. Additionally, you do not need to complete all the quizzes to achieve the maximum score of 20 points.

What Happens If I Miss an Online Worksheet?

I will be dropping the 3-lowest worksheet grades, so if you miss a worksheet for any reason, you can consider that as one of your lowest grades. If you miss more than 3 worksheets and if you have valid/acceptable reasons for all of them (unless it is a medical reason and must provide documentation proof within 24 hours), the first 3 missing worksheets will be dropped, and you will be given a chance to make up the rest (maximum up to 2) during the last day of the semester.

RESOURCES AND POLICIES

Instructor Office Hours and Campuswire

To receive additional support in this class, please participate in daily office hours and post your questions on Campuswire.

HuskyCT and UCONN Email:

All students are provided with an official UCONN email address that is the primary means of communication between the students and the instructor outside of the class. All the class announcements and class notes will be posted on HuskyCT. Students should check HuskyCT regularly for class announcements and course materials. Additionally, students can view and track grades through HuskyCT.

Email policy:

Any email you send to your instructor must have the subject heading: "**MATH 1071Q**". In the body of the e-mail, you must identify yourself (first and last names).

Policy on Re-grading of Exams:

You may request a regrade of your exam within 24 hours of it being made available to you. No regrades will be made 24 hours after the graded exam has been released to you.

Request for Accommodations:

Student Disability Policy: The Center for Students with Disabilities (CSD) at UConn provides accommodation and services for qualified students with disabilities. If you have a documented disability for which you wish to request academic accommodation and have not contacted the CSD, please do so as soon as possible. Detailed information regarding the accommodations process is also available on their website or at www.csd.uconn.edu.

Academic Integrity and Disruption of Academic Process:

We expect the highest standard of academic integrity from our students. Any cheating will result in a failing grade for the assignment or the exam, and possibly for the course. This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. Because questions of intellectual property are important to the field of this course, we will discuss academic honesty as a topic and not just a policy. If you have questions about academic integrity or intellectual property, you should consult your instructor. Additionally, consult UConn's guidelines for academic integrity.

Zero Tolerance Policy -

If a student is caught cheating on any of the assessment components whether it is a single worksheet, or exams regardless of the weight of the assessment towards the final grade, the student shall receive a **F** for the entire course and will be reported to the community standards office. **No exceptions.**

Temporary Grades – I, N, or X: Please refer to office of the registrar/grades.
S-U Grade Policy: Please refer to office of the registrar/grades
Late Assignments: No late assignments will be accepted.

Miscellaneous Policies:

- State common law and federal copyright law protect my lectures, notes, handouts, assessments, and displays. Students are not authorized to provide copies of class materials to anyone else, or make commercial use of them without prior permission from me. Posting any of my assessments, including but not limited to exams, quizzes, and solutions to recommended problems to any website or social media site violates this policy.
- Please refer to the References for Syllabi Links for more information regarding important university policies. For other issues not addressed in this syllabus see the UCONN Undergraduate Student Catalog.

The Courses with a Q Designation:

This course is a Q course, meaning that it has been approved as meeting the General Education requirements for the Quantitative competency. It is a university requirement that Courses with a Q designation should have the following attributes:

- Mathematics and/or statistics at or above the basic algebra level must be an integral part and used throughout the course.
- Courses must include use of basic algebraic concepts such as: formulas and functions, linear and quadratic equations and their graphs, systems of equations, polynomials, fractional expressions, exponents, powers and roots, problem solving and word problems. Formal abstract structures used in symbolic logic and other algebraic analyses are acceptable.
- Courses should require the student to understand and carry out actual mathematical and/or statistical manipulations and relate them to whatever data might be provided in order to draw conclusions. Merely feeding numerical data into a program on a computer or a calculator to obtain a numerical result does not satisfy this requirement. Technology should be viewed as a tool to aid understanding and not as a driver of content.

Your instructor reserves the right to make changes the course syllabus and/or calendar for clarification, to correct any errors, or to adjust to the needs of the class (e.g. addressing learning pace, responding to student feedback, coping with unforeseen circumstances)

Syllabus last updated: Saturday, December 28, 2024