University of Connecticut UCONN

Dr. Schwendner
Spring 2022

MAT1071Q Section Z81
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COURSE: Calculus for Business and Economics, 3 credits, T/Th, 11-1215pm

OBJECTIVES: Welcome! This rigorous, university course is an introduction to calculus and applications designed primarily for students majoring in business, economics, or the life and social sciences. We will study differential and integral calculus, and how calculus is used to solve and optimize business applications. Major topics include limits, derivatives & integrals of algebraic, trigonometric, exponential, and logarithmic functions, optimization, and related rates. *This does not only mean that you should be able to work through problems like those in class, but that you should have the ability to articulate the ideas presented in the course in a clear and coherent manner as well. You should also be able to apply the theory in **new and imaginative** ways as it pertains to business and economics.*

PREREQUISITES: Recommended preparation: Math 1010, 1011 or equivalent and Math 1070. This class is not open to students who have passed Math 1110. This class requires a **very solid understanding** of Algebra.

EXPECTATIONS: I expect you to do most of your learning outside of the classroom. You should expect to spend at least 10+*hours a week* studying and working on calculus outside of class. Mathematics, like most subjects, is learned by doing and understanding process. We will not have time in class for you to do a lot of mathematics yourself. However, I expect you to come to class and participate actively in class discussions. If you miss a class; I expect you to find out what happened. You are responsible for everything that goes on in the class.

TEXTBOOK: Calculus: Applications and Technology, 3rd edition, by *E. Tomastik* bundled with WebAssign. There are three ways to purchase the text and the WebAssign access code:

1. Get the text and WebAssign access code bundled together at the UConn Bookstore.
2. Buy the WebAssign access code when you access your homework through HuskyCT. This includes access to an e-book.
3. If you bought the 1070Q/1071Q bundle previously, you will already have access, see note below. If you are taking 1070Q in the future, you might want to consider this bundle. Both books are included in the bundle. It is available from the bookstore.

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.

If you bought the MATH 1070/1071 textbook bundle you can use your same WebAssign/Cengage login credentials for MATH 1071Q at no additional cost. Please remember to use your same WebAssign/Cengage login credentials when logging into your WebAssign course through HuskyCT for the first-time semester. If you don't use those same login credentials your access will not carry over. If you are taking courses out of sequence, (taking 1071Q first but 1070Q later), you might want to buy the 1070/1071 bundle from the bookstore. It includes textbooks and WebAssign access for both courses for $110.

If you have any questions regarding your WebAssign access, please contact Cengage Tech Support at 800-354-9706 / support.cengage.com

BROWSERS: Please note that many students have experienced problems using WebAssign with Internet Explorer or Safari. We recommend that you use Firefox or Chrome.

HOMEWORK: This is work to be done outside of class. We will not devote much class time to discussing homework problems. The homework for Math 1071 is assigned online using the online homework system ***WebAssign***. You need to purchase access to WebAssign. WebAssign homeworks are integrated with HuskyCT and therefore access to your homework online must be through HuskyCT. Do not access WebAssign outside of HuskyCT. To access your homework online you must go to HuskyCT. There will be

homework assignments for each section. Each homework as a due date. Homework extensions are not granted. It is your responsibility to do his/her homework for a certain lesson right after the respective lesson was taught in class.

You will get 5 attempts to answer each non-multiple-choice question and two attempts for each multiple-choice question. After each attempt, you will be told whether your answer is correct or not. If you are not able to get the correct answer after your initial attempts, we recommend that you seek help from the tutor lab or another student.

WORKSHEETS: There is an optional worksheet that corresponds to each section covered in the textbook. You can access them on HuskyCT. Each worksheet lists the sections objectives, has a few practice problems, and has suggested textbook problems. These practice problems are meant to prepare you for exams. Worksheets do not need to be turned in and solutions are posted. It is recommended that you complete the worksheets before the exams. If you get stuck, review your class notes and the textbook and/or go to office hours. Once you are confident in your solutions, compare your answers to the posted solutions. Reading solutions as an alternative to doing the problems on your own is NOT a good strategy.

TUTORING: Math tutors are available through the Academic Services Center.

OTHER REQUIREMENTS:
1. Required lecture notes are on HuskyCT. It's wise to *come to class with these lectures' notes*.

2. A graphing calculator is required (TI 82, 83, 84, 84+, 85). Calculators that can perform symbolic operations or store symbolic formulas (such as HP 28, 48, TI-92, 98) are not allowed, even if all programs are erased.

EXAMS/GRADING: 4 exams (see plan for dates), a comprehensive midterm and comprehensive final exam. Exams are closed book. Problems will test your understanding of the principles, process, and concepts, rather than repeating what you see in class. There will be new problems on all tests. There will be **no make-ups, no re-takes, no re-grades, etc.** You are responsible to take all exams on the scheduled date. Extra credit is **not** given.

It's possible that we may shift to remote modality. If this is the case, exams will be administered on HuskyCT/Blackboard. Some questions are multiple-choice, free-response and file response. File response questions require you to submit your detailed work as part of the exam. File response questions require you to (1) take an image of all your work, (2) combine/batch all the images for that problems and create ONE PDF file (only PDF file attachments will be allowed (no pns, docx, jpeg, etc.)), (3) email your single PDF file to your UConn email account and then (4) attach your PDF work to the specific exam question.

Your final grade will be determined as follows:

Test	***Value***	***Target***
WebAssign Homework	20%	Continuous
Your **best 3** exams	30%	See plan
Comprehensive midterm	25%	See plan
Comprehensive final	25%	Week of 5/4

FINAL EXAM: In accordance with UConn policy, students **are required to be available for their final exam** and/or complete any assessment during the time stated. If you have a conflict with this time you must obtain official permission to schedule a make-up exam with the Dean of Students. If permission is granted, the Dean of Students will notify the instructor. Please note that vacations, previously purchased tickets or reservations, graduations, social events, misreading the assessment schedule, and oversleeping are not viable reasons for rescheduling a final

ACADEMIC INTEGRITY POLICY: A fundamental tenet of all educational institutions is academic honesty: work depends upon respect for and acknowledgment of the work and ideas of others. Misrepresenting someone

else's work as one's own work is a serious offense in any academic setting, and it will not be condoned.

Academic misconduct includes, but is not limited to, providing, or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g., papers, projects, quizzes, tests – whether online or in class), presenting as one's own any ideas, words or calculations of another for academic evaluation: doing unauthorized academic work for which another person will receive credit or be evaluated, using unauthorized aids in preparing work for evaluation (e.g., unauthorized calculators, programs or formulas loaded into your calculator, etc.); and presenting the same or substantially the same papers or projects in two or more course without the explicit permission of the instructors involved.

A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in The Student Code.

Sanctions shall include, but not limited to, a letter sent to the Dean of Students of the University, a grade of 0 on the assignment, quiz or exam, a grade of F 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 with your instructor. Additionally, consult UConn's *guidelines for academic integrity*.

STUDENT COURSE CONDUCT: To respect everyone's right to a productive learning environment, you do not want to distract yourself or your classmates. Please refrain from disruptive activities during lecture and discussion section. This includes browsing the internet. Please turn *off* all personal electronic gadgets, including smartphones, before entering a classroom (except calculators and, for lectures, clickers). You may not use a laptop during class unless you show me that you can take notes electronically on advanced math in real time. On a positive note, do feel free to ask questions!

COPYRIGHT LAWS: My lectures, notes, handouts, and displays are protected by state common law and federal copyright law. They are my own original expression and I've recorded them prior or during me lecture to ensure that I obtain copyright protection. Students are authorized to take notes in my class; however, this authorization extends only to making one set of notes for your own personal use and no other use. I will inform you as to whether you are authorized to record my lectures at the beginning of each semester. If you are so authorized to record my lectures, you may not copy this recording or any other material, provide copies of either to anyone else or make a commercial use of them without prior permission from me.

POLICY AGAINST DISCRIMINATION, HARASSMENT AND RELATED INTERPERSONAL VIOLENCE: The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate amorous relationships can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate amorous relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Additionally, to protect the campus community, all non-confidential University employees (including faculty) are required to report sexual assaults, intimate partner violence, and/or stalking involving a student that they witness or are told about to the Office of Institutional Equity (OIE). Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with university officials who can help.

An exception to this reporting exists if students disclose information as a part of coursework submitted to an instructor in connection with a course assignment. Even in the absence of such obligation, all

Employees are encouraged to contact OIE if they become aware of information that suggests a safety risk to the University community or any member thereof. The University takes all reports with the utmost seriousness. More information, including resources and reporting options, is available at equity.uconn.edu and titleix.uconn.edu.

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/.

SEXUAL ASSAULT REPORTING POLICY: To protect the campus community, all non-confidential University employees (including faculty) are required to report assaults they witness or are told about to the Office of Diversity & Equity under the Sexual Assault Response Policy. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with university officials who can help. More information is available at sexualviolence.uconn.edu.

STATEMENT ON ABSENCES FROM CLASS DUE TO RELIGIOUS OBSERVANCES AND EXTRA-CURRICULAR ACTIVITIES: Faculty and instructors are strongly encouraged to make reasonable accommodations in response to student requests to complete work missed by absence resulting from religious observances or participation in extra-curricular activities that enrich their experience, support their scholarly development, and benefit the university community. Examples include participation in scholarly presentations, performing arts, and intercollegiate sports, when the participation is at the request of, or coordinated by, a university official. Such accommodations should be made in ways that do not dilute or preclude the requirements or learning outcomes for the course. Students anticipating such a conflict should inform their instructor in writing within the first three weeks of the semester, and prior to the anticipated absence, and should take the initiative to work out with the instructor a schedule for making up missed work. For conflicts with final examinations, students should contact the Office of the Dean of Students.

Week	Date	Sections	WebAssign Homework	Worksheet
1*	1/18 1/20	Course Intro A1 Exponents & Roots A2 Polynomials & expressions / A6 Lines	00	
2*	1/25 1/27	1.1 Functions 1.2 Math models	01, 02	1.1, 1.2
3*	2/1 2/3	1.3. Exponentials 1.4. Combinations 1.5 Logarithms	03, 04	1.3,1.4,1.5
4	2/8 2/10	3.1 Limits 3.2 Rates of Change 3.3 The derivative ***Exam 1***	05, 06, 07, 08	3.1,3.2,3.3
5	2/15 2/17	4.1 Derivatives of Powers & Sums 4.2 Derivatives of Products & quotients 4.3 Chain Rule	09, 10, 11	4.1,4.2,4.3
6	2/22 2/24	4.3 Chain Rule 4.4 Derivatives of Exponential and logarithmic functions	11, 12	4.3,4.4
7	3/1 3/3	3.4 Local Linearity 4.5 Marginal Analysis ***Exam 2***	13	3.4,4.5
8	3/8 3/10	5.1 The first derivative 5.2 The second derivative 5.3 Limits at infinity ***Midterm***	14, 15, 16	5.1,5.2,5.3
9	3/15 3/17	Spring Break		
10	3/22 3/24	5.4 Curve sketching 5.5 Absolute Extrema 5.6 Optimization	17, 18, 19	5.4,5.5,5.6
11	3/29 3/31	6.1 Antiderivatives ***Exam 3***	20	6.1
12	4/5 4/7	6.1 Antiderivatives 6.2 Substitution	21	6.1
13	4/12 4/14	6.3 Estimating Distance travelled 6.4 The Definite Integral	23	6.2,6.4
14	4/19 4/21	6.5 Fundamental Theorem of Calculus 6.6 Area/curves	24, 25	6.5,6.6
15	4/26 4/28	Catch Up/Review ***Exam 4***		
16	Week of 5/2	***Cumulative Final Exam***		

** Weeks 1-3 is review of prerequisite material*