University of Connecticut

MATHEMATICS FOR BUSINESS & ECONOMICS

DR. BILL SCHWENDNER
MATH 1070Q, Z81
FALL 2021
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COURSE:
Mathematics for Business & Economics, 3 credits, T/Th, 930-1045am

TEXTBOOK: **Applied Finite Mathematics,** Customer Edition by *E. Tomastik and J. Epstein.* You can purchase the bundled version of Applied Finite Mathematics with a WebAssign code from the UConn Bookstore or directly from the publisher's website. Alternatively, you may also purchase a WebAssign access code directly from WebAssign and obtain a copy of the text elsewhere. See "*M1070Q Bundle Options*" in HuskyCT for more details.

OBJECTIVES:
Four major topics are studied: (1) Math of Finance, (2) Linear Programming, (3) Probability and (4) Statistics.

This course will study finance formulas, linear equations, inequalities, exponents, logarithms, matrices, linear programming, optimization, probability, and basic statistics, and how these topics are used to solve/optimize business applications. This means you should: (1) be able to work through problems like those seen in homework, (2) can articulate the ideas presented in the course in a clear and coherent manner, and (3) be prepared to solve new business-related quantitative problems.

PREREQUISITES:
(1) Math 1010 or equivalent, (2) Solid understanding of algebra, and (3) Business / Economic concepts/principles, e.g., P = R - C.

EXPECTATIONS:
I expect you to do most of your learning outside of the classroom. You should expect to spend between 5-10 hours per week re-reading the lecture slides/notes, re-listening to any recorded lectures, reading the textbook, reviewing worked-out textbook problems, completing required homeworks outside of class. **Mathematics is learned by understanding concepts and theories and then applying that knowledge to solve real-time problems.** We will not have time in class for you to do a lot of mathematics yourself. However, I do expect you to come to class and participate actively in class discussions. If you miss a class, I expect you to take the initiative to find out/learn what was covered and remain current with the class.

HOMEWORK:
This is required work you do outside of class. We will devote little class time to discussing homework problems. Homework questions can be addressed during office hours or with the math tutor. I encourage you to put a lot of effort into figuring out a problem before consulting assistance. Homework will be graded. Each homework has a deadline. Late homeworks will not be accepted. Homeworks will not be extended.

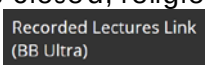
WEBASSIGN:
Required online homework is assigned and accessed using WebAssign. WebAssign must be **accessed through HuskyCT**. To get to the WebAssign homeworks, logon to HuskyCT, access our Math 1070 class and click the WebAssign Homeworks link on the left navigation menu.

This will take you directly to the WebAssign homework assigned for the class. The first 2 weeks of WebAssign is free (trial period). After the trial period has expired, you are required to enter a permanent access code (was provided with your textbook or purchased directly from WebAssign). You will usually have 5 attempts to answer each non-multiple-choice question. For multiple choice questions the number of attempts will vary based on the content. 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 a couple attempts, discuss with your classmates, the tutor lab in the library or your tutor. When accessing your online homework, use **Firefox or Chrome as your browser**: there are problems that can occur if you use Internet Explorer or Safari.

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

LECTURE SLIDES:
Lecture slides are available in 

in HuskyCT.

LECTURES / RECORDINGS:
Some lectures may be pre-recorded (e.g., campus closed, religious holiday, etc.). In this case, you can access the pre-recorded lectures in 

in HuskyCT and click on the hamburger: 

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MANDATORY UCONN TECHNICAL REQUIREMENTS:

- A computer (PC, Mac, iPad) with functioning webcam / Reliable internet.
- A printer in case an assignment is emailed, and you are required to print it and provide the solution on the printout.
- 3rd party smartphone app that can bundle multiple images into one PDF file (e.g., CamScanner)

CALCULATOR POLICY:
A scientific calculator is required for the course (**graphing calculators are not permitted**). However, during online tests, LDB will provide an online calculator. You will not be able to use your private calculator during tests. At a minimum, your calculator should be able to perform the standard scientific calculator operations (for example, factorials, combinations, powers, logarithms, etc.).

EXAMS/GRADING:
Exams will be taken in class, during scheduled class time. Performance on 4 tests, a comprehensive midterm, comprehensive final exam and WebAssign homeworks will determine your overall course grade. Problems will test your understanding of the principles, process, and concepts, rather than repeating what you see in class. You will see new problems on the exams. There will be **no make-ups, no re-takes, no papers, etc**. You are responsible to take the quiz/exam on the scheduled date. Extra credit is **not** given. Your final grade will be determined as follows:

Test	***Value***	***Target***
WebAssign Homework	20%	Ongoing
Your best 3 test grades	30%	See plan
Comprehensive midterm	20%	See plan
Comprehensive final	30%	See plan

FINAL EXAM:
Final exam week for Fall 2021 takes place starting Monday, December 13. Students are required to be available for their exam during the stated time. If you have a conflict with this time, you must visit the Dean of Students Office to discuss the possibility of rescheduling this exam.

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.

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, while listening to the lectures. On a positive note do feel free to ask questions!

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. 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 equity.uconn.edu and titleix.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.

REMOTE OFFICE HOURS: T/Th before class.

TECHNICAL SUPPORT: Technical support for HuskyCT is provided through ITS at techsupport@uconn.edu.

CDC/COVID-19: Mask-wearing is a university policy. Masks are required when indoors. This includes classrooms and laboratories, and applies to both vaccinated and unvaccinated students, faculty, and staff. Social distancing will be observed.

Week	Date	Topic/Section
1	8/31	Syllabus Review, F.1
	9/2	F.1,F.2
2	9/7	F.2, F.3, F.4
	9/9	F.4,1.1
3	9/14	**Test 1** (Ch: AlgRev, F)
	9/16	Holiday (No Class)
4	9/21	1.2,1.3
	9/23	1.3,1.4
5	9/28	1.4,2.1
	9/30	2.1,2.2
6	10/5	**Test 2** (Ch: 1)
	10/7	2.2
7	10/12	3.1,3.2
	10/14	3.2,3.3,3.4
8	10/19	**MidTerm** (Ch F, 1, 2, 3)
	10/21	4.1,4.2
9	10/26	4.3,4.4
	10/28	4.5,4.6
10	11/2	4.7,5.1
	11/4	5.2,5.3,5.4
11	11/9	**Test 3** (Ch 4,5.1)
	11/11	6.1,6.2
12	11/16	6.2,6.3
	11/18	6.3,6.4
13	11/30	6.4
	12/2	**Test 4** (Ch 5,6)
14	12/7	Make Up Day
	12/9	Final Exam Review
15	Week of 12/6	**Final Exam**

MATH 1070 FALL 2020 PLAN (SUBJECT TO CHANGE)

Section	Topic	Other Optional Exercises
	Syllabus review	
F.1	Simple Interest and Discount	357/1,5,9,13,21,27,29
F.2	Compound Interest	366/3,5,13,17,34
F.3	Annuities & Sinking Funds	374/3,7,17,21,23
F.4	Amortization	383/1,7,11,15,31,43
1.1	Mathematical models	13/1,3-5,7,10,13,15,23,27,29,31,37,51
1.2	System of Linear Equations	26/1,5,9,13,17,19,31
1.3	Gauss Elimination Sys Linear Equations	45/1-13,29,33,37,39,47
1.4	System of Linear Equations with Non-Unique Solutions	62/1-12,17-25odd,51,56
2.1	Introduction to Matrices	94/1,3,21,43
2.2	Matrix Multiplication	108/1-15odd,35,41,53
3.1	Linear Programming Problems	150/1-13odd,15,21
3.2	Graphing Linear Inequalities	165/1-15odd,25,31,43,49-59odd
3.3	Graphing Solutions of Linear Programming Problems, Post Optimal Analysis	177/1-7,11,23-31odd,41 182/4,6
4.1 4.2	Introduction to Sets Number of Elements in a Set	191/1-7,11,13,23-29odd,47,51 199/1-11odd,21,23,25
4.3	Sample Space and Events	207/1-9odd
4.4	Basic Probability	214/1-14,19,21,23,29
4.5	Rules of Probability	222/1-18,31,33
4.6	Conditional Probability	234/1-17odd,25,27,37,39
4.7	Bayes' Theorem	243/1-7,9,21,25,31
5.1	The Multiplication Principle and Permutation	262/1-21odd,25,27,31,35
5.2	Combinations	270/1-21odd,25,27,29,31,35
5.3	Probability Applications of Counting Principle	276/1,3,5,7,10,11,25,27
5.4	Bernoulli Trials	282/1-5odd
6.1	Random Variables and Statistics	300/1-9odd,11,19,21
6.2	Measures of Central Tendency	312/1-11odd,33,35,37
6.3	Measure of Spreads	325/1-9odd,19,21,25
6.4	The Normal Distribution	3371-5odd,9,11,23

A snapshot of MAT1070Q HuskyCT homepage

