Syllabus - Summer Session 1, 2018

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, in-person exams
Recommended preparation: MATH 1011Q or the equivalent, and MATH 1070Q, and a qualifying score on the mathematics placement assessment.
Professor: Katie Hall

Email: katie.hall@uconn.edu (during the class, all messages should be sent through Piazza, either privately or publicly)
Telephone: 860-486-1426
Office: MONT 408
Office Hours/Availability: Office Hours: TBA (will be online), will respond to online questions within 24 hours

Course Materials

Textbook: Calculus, Applications and Technology (3rd edition) by Edmond C. Tomastik, bundled with WebAssign code.

There are three ways to purchase the text and the WebAssign access code:

- Get the text and WebAssign access code bundled together at the UConn Bookstore.
- Get the text and WebAssign access code from the publisher's special website. (will be e-mailed to students)
- Get the text separately from anywhere, and buy the WebAssign access code when you access your homework through HuskyCT.

We do not recommend using the third option above, because if you buy the WebAssign access code separately then you will have to buy it for $95 dollars. The cost of the book and WebAssign access code bundled together (from the publisher’s website or from the UConn Bookstore) is less than $95. The option to buy the text and WebAssign access code bundled together lets you use that access code for the life of the edition of the textbook.

You will have two weeks of free access to WebAssign, including the e-book, so you can get started right away in case you need some time to arrange to buy textbook with the access code.

Calculators: Graphing calculators: TI 82, 83, 84, 84 plus, 85 or 86 may be used. Models TI-89 and above (including TI-Nspire) are not permitted on the exams. A graphing calculator is recommended but not required. You will need (at the least) a basic calculator that can do powers, exponentials and logarithms for exams.

Additional course readings and media are available within HuskyCT.
Course Description

Derivatives and integrals of algebraic, exponential and logarithmic functions. Applications.

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 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.

Course Outline

Module 1: Sections A1,A.2, A.6 (in appendix), 1.1-1.5, 3.1-3.3 and 4.1-4.2. Ends Friday, June 8.
Module 2: Sections 4.3-4.5, 3.4, 5.1-5.5. Ends Wednesday, June 20.
Module 3: 5.6, 5.8. 6.1-6.2, 6.4-6.6. Ends Friday, June 29.

You are responsible for setting your own schedule and keeping up with the course material. The suggested schedule on the last page of this document is provided as a guide. It is for students who want to spend some time each day working on the course, with weekends off. You may need to adapt it to meet your schedule.

Course Requirements and Grading

Summary of Course Grading:

<table>
<thead>
<tr>
<th>Course Components</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in Course Discussion Board</td>
<td>5%</td>
</tr>
<tr>
<td>/ Office Hours</td>
<td></td>
</tr>
<tr>
<td>WebAssign Homework/Quizzes</td>
<td>20% + (3% extra credit)</td>
</tr>
<tr>
<td>Midterm Exams (2)</td>
<td>2x20% = 40%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
</tbody>
</table>

Participation in Course Discussion Board / Office Hours

Students must interact with their peers and instructors in this course.

- Ways to Earn Points
  Students can earn points by asking or answering question on the Piazza discussion board. If you don't have questions, you can post an exam style question for your classmates to answer. (If there are a sufficient number of exam style questions posted on Piazza, some of them will show up on the final exam). Each (public) Piazza post will earn one point.

  Students can also earn point by actively participating (asking and answering questions) in online
office hours. Office hours will be held at various times throughout the week by both the instructor and the TAs for the course. They take place virtually - you do not need to be on campus. Each active participation will earn 2 points.

- Extra Conditions
  - Students must earn 15 participation points throughout the course of the semester.
  - Students can earn at most 5 points a week.

**WebAssign Homework/ Quizzes**

The homework for Math 1071 is assigned online using the online homework system 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.

There will be homework assignments for each section of the text. Homework due dates are listed in WebAssign, they are generally twice a week. Tentative dates are listed on the course calendar on the last page of this document. 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 your instructor or another student via Piazza or office hours.

There will be a quiz on each homework assignment. These assignments are designed to provide you with extra practice. You have two attempts at each quiz question. Completion of quizzes earns students extra credit in the course. Correct completion of all assignments will earn students 3% extra credit. If only some quizzes are completed, students will earn the same portion of that 3%.

**Exams (Midterms and Final)**

- Midterm 1: Friday, June 8 10am-12pm. It covers A1-A6, 1.1-1.5, 3.1-3.3 and 4.1-4.2. (Counts 20% towards overall grade)
- Midterm 2: Wednesday, June 20, 10am-12pm. It covers 4.3-4.4, 3.4, 4.5, 5.1-5.5. (Counts 20% towards overall grade)
- Final Exam: Friday, June 29, 10am-12pm. Cumulative. Covers above sections and 5.6, 5.8, 6.1-6.2, 6.4-6.6 (Counts 35% towards overall grade)

These exams are in-person. They take place on UConn-Storrs campus. If you are going to be out of state, or otherwise unable to take the exam on campus, you must make arrangements to take it with an approved proctor. More details will be provided at the start of the class. Arrangements must be finalized at least four business days before the exam.

Any academic integrity violation related to an exam will result in a grade of 0 on that exam and a referral to the disciplinary board.

**Missed Exam Policy**

If there is an approved reason for you to not take an exam at its designated times, you must notify the instructor in advance to make arrangements.

Students who are unable to attend an exam due to an emergency situation should notify their instructor via e-mail as soon as possible and within 36 hours. Arrangements for a make-up test will be considered on a case by case basis. Make-up exams will be administered only at the discretion of the instructor. If a student is allowed to make up a missed exam, (s)he must take it at a mutually arranged time. No further opportunities will be extended.

Make-up exams may be penalized up to 10% of the earned grade depending on the reason for the make-up. Failure to contact the instructor as stated above will result in a grade of zero on the exam. This policy applies to the first missed exam only. Repeated offenses will be dealt with on a case-by-case basis, but generally will not be allowed to be made up.
Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>73-76</td>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>60-62</td>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

This scale may be adjusted (to be more lenient) at the end of the course, as needed.

Due Dates and Late Policy

The exam dates and times are listed above. Students taking exams remotely should schedule them for 10am local time.

The homework (WebAssign) due dates are listed in WebAssign. Deadlines are based on Eastern Daylight Time; if you are in a different time zone, please adjust your submittal times accordingly. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.

You may request an automatic extension on WebAssign homework through the WebAssign site. This must be done within two weeks of the original due date. The extension will give you an additional 48 hours to complete the assignment. Any work completed after to original deadline will only earn 80% of the credit.

Feedback and Grades

I will make every effort to provide feedback and grades on exams. You should expect exam grades to be posted within 2 business days. To keep track of your performance in the course, refer to My Grades in HuskyCT. If you would like to see your exams, you should contact the teaching staff (via a private message on Piazza) to make arrangements.

Exam Proctoring

This class has in-person exams. If you are taking the class remotely, you will be required to find a proctor for the exam. This may require you to have to pay a fee. There is no fee to take the exam on campus.

How to Approach the Course

All of the course materials are available on or linked from HuskyCT.

This course moves at a very fast pace! For a typical course throughout the semester, you spend 3 hours a week in class and an additional 2-3 hours on homework and reviewing. Since this class is condensed to 5 weeks instead of the standard 15, you should expect to spend at least 3 times that. In particular, you should be spending at least 9 hours a week watching the videos and reading along in the textbook to learn the course material and another 6-9 hours on doing homework. You are expected to cover three weeks of material every week of the course. You need to be very careful about keeping up with the material.
Course Videos
Each section of the textbook has a video that goes along with it. These videos go through samples of how to solve various problems. You need to read through the textbook to get a big picture understanding of each section.

Worksheets
There is a worksheet that corresponds to each section covered in the textbook. You can access them through 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 the exams. Worksheets do not need to be turned in and solutions are posted. It is recommended that you complete the worksheets before the exams on those sections. If you get stuck, review your class notes and the textbook and/or go to office hours or ask on Piazza. 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.

Participate!
You should take advantage of the fact that you are in a class with many other students also working on the same material. Post questions on Piazza, answer other students question, plan times to meet other students in the online chat/video chat room or in person.

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
- 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)
- WebAssign (Access through HuskyCT, WebAssign Accessibility Statement, WebAssign Privacy Policy)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).

**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:

- Work within two or more browser windows simultaneously.
- Open and access PDF files.

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.