

General Overview

The objectives of this course are similar to a standard introductory calculus course (e.g. Math 251). However, there are some major differences. Trigonometric functions are absent and there is a greater emphasis on applications related to business, economics, and the social/life sciences.

Math 241 is a prerequisite for Math 242 and it is important that the students attain a certain level of confidence in computing derivatives of basic functions before moving on to Math 242.

Examples and modeling in physics should be deemphasized. Instead we suggest using examples related to business, economics, and the social sciences when introducing or teaching concepts. E.g. use cost, revenue, profit, population dynamics etc.

The text used for this course is *Calculus for Business, Economics, and the Social and Life Sciences* by Laurence D. Hoffmann and Gerald L. Bradley, Tenth edition.

Chapters covered:

Math 241 – Chapters 1, 2, 3, and 4

Math 242 – Chapters 5, 6, and 7

Sections 1.1, 1.2, 1.3, 1.4 consist mainly of review of prerequisite material. We suggest spending no more than two lecture days on these sections. The main emphasis should be placed on establishing the functions for cost, revenue, and profit.

Sections 1.5 and 1.6 introduces the students to limits. Emphasize a more intuitive approach when teaching this material.

Chapter 2 introduces the derivative along with the techniques and rules for computing derivatives. This is the heart of the course. Be sure to spend quality time on each of these sections, especially the chain rule.

We suggest to temporarily skip over chapter 3 and cover this chapter last. Instead first cover sections 4.1, 4.2, and 4.3. These sections cover the exponential and logarithm functions. It is not necessary to review the rules of exponents. However, be sure to review exponential models such as compound interest along with the definition and the basic rules of logarithms and their applications.

Sections 3.1, 3.2, 3.3 introduces the students to function analysis and curve sketching. Consider including problems from chapter 4 with these sections.

Sections 3.4 and 3.5 introduces the students to applied optimization. Be very selective of the problems in section 3.5. Also, consider including problems from chapter 4 with these sections.

Math 241 - Calculus For Business and Social Science I (LL)**Winter 2011**

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GTF:

Office: **Phone:** **e-mail:** **Office Hours:**

Text: *Calculus* by Hoffmann and Bradley, Tenth Edition

Exams: There will be one 70 minute midterm exam given during regular class period and seven quizzes given during discussion sessions, and a final exam. See schedule below for exam and quiz dates and times. ***The exam dates and times are not negotiable and there will be no make-ups on either of the exams. In the case of an illness, or a conflict with a sanctioned university activity or event, special arrangements will be made. Just be sure to provide me with the proper documentation for your activity or event***

Grade: Your course grade will be based on a weighted average score of your homework, quizzes, midterm, and final exam. The relative value of these components is as follows: Homework – 15%, Quizzes – 25%, Midterm – 30%, Final Exam – 30%. The scale for determining your final grade is as follows: **A**=(90-100%), **B**=(80-89%), **C**=(70-79%), **C⁻**=(65-69%), **D**=(55-64%), **F**=(0-54%). ***There is no extra credit.***

Quizzes: During seven of the discussion sessions there will be a quiz. The questions on these quizzes will be variations of the homework problems. Only the top six quizzes will count toward your grade. If you miss a quiz, then your total quiz grade will be computed from the six quizzes taken. ***There are no make-ups on quizzes.***

Homework: All homework sets that will be graded are given in WebWork and will be submitted through WebWork. See details below.

Calculators: A graphing calculator is required for this course. We highly recommend the TI-83, or TI-84. Many of the assigned exercises will call for the use of such a calculator. You are expected to know how to use your calculator. ***Calculator help will not be given during exams!***

****NOTE: The use of the TI-89, or any similar advanced graphing calculator, is PROHIBITED on all exams and quizzes.***

Bring your text and calculator to each class session!

Math 241 – Schedule (tentative)

<u>Week</u>	<u>Sections covered</u>	<u>Discussion Session</u>	<u>Homework Due</u>
1	1.1, 1.2, 1.3, 1.4, 1.5	WebWork Help	None
2	1.6, 2.1	Quiz #1 (1.1–1.4)	1.1, 1.2, 1.3, 1.4
3	2.2, 2.3	Quiz #2 (1.5, 1.6)	1.5, 1.6
4	2.4, 2.5	Quiz #3 (2.1, 2.2)	2.1, 2.2
5	2.6	Quiz #4 (2.3, 2.4)	2.3, 2.4
6	4.1, 4.2, Midterm	Review	2.6
7	4.3, 3.1, 3.2	Quiz #5 (2.6)	
8	3.3, 3.4	Quiz #6 (4.1, 4.2, 4.3)	4.1, 4.2, 4.3
9	3.5	Quiz #7 (3.1, 3.2, 3.3)	3.1, 3.2, 3.3
10	4.4	Review	3.4, 3.5
11	Final Exam		

Exam Dates

Midterm # 1 – Friday, February 11th (Sections 1.1–2.6)

Final Exam – Monday, March 14th at 10:15am (Comprehensive)

Note: This schedule is subject to change during the term !

Math 241 – Homework Assignments (Hoffmann and Bradley, Tenth Ed.)

All homework will be given and submitted through WebWork. **WebWork is a free**, web browser-based program that maintains and grades a pool of homework problems.

Log in to WebWork through the link button on the main menu of **your discussion Blackboard site** labeled “WebWork”.

To sign in to Webwork you will need to input both your username and password. Your username is your U of O e-mail name (the name before the @, and your password is your 9-digit U of O ID number. Once you have logged in, you can reset your password.

I highly recommend having scratch paper available to complete your work. While WebWork does not grade you on the process for each problem, having a comprehensive thought process is necessary. Remember: On quizzes and exams showing your work is extremely important! On most of the problems you will have the opportunity to submit your answer many times. I also suggest that you print a hard copy of each of the homework sets, work through the problems, and then go back and submit your answers later.

Text Practice Exercises: Although you do not turn them in, I have listed all of the odd numbered problems from the text which you might benefit from practicing. The problems listed below are strongly recommended. You should do these, as your ability to do them will be assumed. I’m not suggesting that you do them all, but the problems listed below would provide you with solid additional practice with the material. Many of the questions on your exams and quizzes will be variations of the text practice problems as well as the WebWork problems.

Your Assignments must be submitted each week on **WebWork** usually by 11 pm on Friday. Check WebWork for the dates and times which each homework set is due. **There will be no extended time given for submitting homework.**

Section	Text Odd Practice Problems	Section	Text Odd Practice Problems
1.1	1 – 67, 73	3.1	1 – 55
1.2	1 – 41, 47, 51	3.2	1 – 61
1.3	1 – 49	3.3	1 – 49,
1.4	1, 3, 45 – 49		(Sec. 4.4# 1 – 25)
1.5	1 – 51, 53, 57	3.4	1 – 33, 39, 41,
1.6	1 – 49, 53		(Sec. 4.3# 39 – 45, 65 – 77),
2.1	1 – 35		(Sec. 4.4# 29 – 43)
2.2	1 – 57, 61, 63	3.5	1 – 17, 21 – 25, 29, 37
2.3	1 – 35, 41 – 55	4.4	29, 35, 43
2.4	1 – 67, 73, 79		
2.5	1 – 25		
2.6	1 – 35, 39, 41 – 51		
4.1	1 – 65		
4.2	1 – 55		
4.3	1 – 37, 47 – 63, 69 – 81		

Extra help: If my office hours or your GTF’s office hours don’t work for you, we recommend that you try the free tutoring and help available in the Teaching and Learning Center(TLC), located on the ground floor of the PLC building. The TLC also arranges small tutoring groups, and maintains lists of private tutors. There is a fee for the last two services. Contact Doug Hintz at 346-3226 in 68 PLC for TLC services. Also, I highly encourage you to study with fellow Math 241 students. Take time before or after class to connect with your fellow classmates.

Other Important Dates:

Monday of 2nd week - Last day to drop this class without a ‘W’ and without paying a fee
Sunday of 7th week - **Last day to drop this class --- period !!**