

Applied Calculus Fall 2009, MTH 175, 4 Credits Section 3: MTWH 7:45 - 8:40 in 0149 Cowley Hall Section 4: MTWH 8:50 - 9:40 in 0149 Cowley Hall	Dr. James Peirce , 1027 Cowley, 785-6604 Office Hours: MTu 2-3, W 2-4 in MLC email: peirce.jame AT uwlax DOT edu web: www.uwlax.edu/faculty/peirce/175Fall09/
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Course Description: Basic concepts and methods from differential, integral, and multivariate calculus. Logarithmic and exponential functions are included, but not trigonometric functions. Emphasis of the course is on models and applications in business and the social, life, and physical sciences. Prerequisite: MTH 150 or two years of high school algebra and an appropriate placement test score.

Learning Objectives: The objectives of Applied Calculus are for you to develop a command of the topics in the course description and to be able to apply these concepts to solve problems in the business and physical sciences.

Text: *Calculus For Business, Economics, Life Sciences, and Social Sciences, (10th Edition)*, by Barnett, Ziegler, and Byleen. Most of the material in chapters one through eight will be covered. Due to the amount of material covered, it is very important that you keep up with the assigned reading and homework. This is a well written textbook with many examples and perspectives; to best prepare yourself for class, you should read ahead.

Warning: It is assumed that you know or can easily recall/learn the material contained in Appendix A, *Basic Algebra Review*. Please refresh your memory **AS SOON AS POSSIBLE** by studying this material. You can also get help at links from the course website (it includes algebra and calculus help). If you have trouble with this material, please see me.

Homework: Suggested homework problems will be assigned each class period and should be attempted by the NEXT CLASS PERIOD. Homework will not be collected, but thoughtful completion of the suggested homework problems is the most reliable path to success in this course. You are strongly encouraged to work together on homework at the Math Learning Center located in Whitney Hall. The Tutoring Center has large tables where you can spread out and work either alone or with a classmate. And, if you get horribly stuck, you can get help from a member of the Math Center staff.

Exams: There will be 4 exams evenly spaced in the semester. The final exam will be comprehensive with an emphasis on material covered after the fourth exam. **EXAM DATES:**

Exam 1	Oct. 1	Exam 3	Nov. 12	Final	Saturday Dec. 19
Exam 2	Oct. 22	Exam 4	Dec. 3		4:45pm - 6:45pm

Quizzes: There will be 10 in-class quizzes given on every Thursday. The problems on the quizzes will be VERY similar to problems from the assigned Homework. If you do the homework, the quizzes should be easy and quick to do. WARNING: If you do not do the homework problems, you will have a very difficult time finishing the quiz in the allotted time.

Make-up Quizzes and Exams: There are no make-up exams. In an emergency situation, of course an exam is not a priority. Get in contact with me as soon as you can. If you have advance notice of some conflict, you should make a clear effort to notify me before the exam. By not getting prior approval, you risk scoring a zero for the exam. There are no make-up quizzes after the quizzes are taken. I drop the lowest quiz score in case you miss the quiz or have an off-week.

Calculators: Calculators will not be necessary for this course. You will not be able to use them on the quizzes, exams, or on the final. Please try to do your homework without the assistance of a calculator.

Grading: Your final grade will be based on

10 weekly quizzes	15 points each; lowest dropped	135 points
4 exams	100 points each	400 points
comprehensive final		150 points
TOTAL	Maximum Possible	685 points

A	630-685
AB	603-629
B	562-602
BC	534-561
C	480-533
D	411-479
F	Below 411

Note that these totals may be adjusted downward slightly. Final cutoffs for these grades as well as cutoffs for AB and BC will be determined based on clustering of scores.

Extra Credit: There will be NO opportunity to earn extra credit. If you need a C or better in this class you should try to build a comfortable margin before taking the final exam. If you need to practice on more problems or exercises, please see me.

AND Finally: If your cell phone rings, buzzes, or makes an audible sound during class you will bring in cookies to share with class at the next meeting.

Ways to succeed in this class:

Class Attendance: If you miss class due to circumstances beyond your control or if despite efforts you do not understand material covered in class, I am EAGER to provide additional help! If you can't meet during my office hours, feel free to contact me by phone or email to set up an appointment. On the other hand, if you choose to skip class or sleep through class you should not expect me to provide private tutoring on the material you missed.

Ask Questions: If you have questions on the homework you have been working on or on questions on the material covered in class, you can come to my office hours. If you cannot make these hours, just talk to me and we'll set up a time that works for both of us. You're welcome to stop by my office anytime and see if I'm free.

General Strategy: Each section of the book has a large number number of exercises following a discussion of the topics. Most problem sets are divided into four subsets, labeled **A**, **B**, **C** and **Applications**. The exercises in sets **A**, **B**, and **C** are arranged (more or less) in order of difficulty. The problems in set **A** are described as *routine*, *easy mechanics*, and the sets **B** and **C** are more difficult mechanics. You should be able to work through set **A** with little or no instruction (after reading the text and worked examples).

The goal of the course is to become familiar with the theory and skills related to algebra and calculus so that we can solve **Applications**. The following list of steps is the way in which I suggest you study for this course:

- Study in groups.
- Each night, read the section that is going to be covered the next class period.
- Look for relationships (similarities and differences) between this new section and the sections that came before (there are usually many).
- Work through (don't just read) the examples in text.
- Come to class the each day prepared to ask questions related to any concept or problem that you do not understand.
- After class, attempt to complete all of the problems that you were not able to complete the night before.
- Try to make sure that you cannot only successfully *complete* the problems, but that you also *understand* why the solution process works.
- Make a point how it is you will communicate your work. On exams and quizzes, it is necessary to "Show Me How" to find the solutions to each problem, not simply come up with the answer.
- Remember that there is quite a bit of help available. So if you cannot complete this list, get help (soon). Specifically, **make use of my office hours!**
- Try the review problems at the end of each chapter, so that you can ask pointed questions. Prioritize the material—often the number and type of assigned homework problems is a huge clue. Spend time on your weaknesses: getting the first 50% of a problem right is worth more to your grade than the last 10%.
- Force yourself to practice under conditions close to those of a real test: Write out and mix up several problems, close all study material, and time yourself. You might even want to assign consequences to the results so that you're under real pressure.

Accommodation: Any student with a documented disability (e.g., physical, learning, psychiatric, vision, or hearing, etc.) who needs to arrange reasonable accommodations must contact the instructor and the Disability Resource Services office (165 Murphy Library) at the beginning of the semester.