MATH 220: Calculus I
Spring 2009
Syllabus and Course Information

Meeting Time:	MWF 8:00 – 8:50 a.m. in MRC 414, Th 8:00 – 8:50 p.m. in MRC 348		
Instructor:	Dr. Sheldon Lee	**Office**:	MRC 530
Phone:	796-3658	**Email**:	SHLEE@viterbo.edu
Office hours:	9 – 11 Monday, Wednesday, Friday; 12 – 2 Tuesday; 1 – 2 Thursday		

Catalog Course Description: Limits and Continuity. Derivatives and applications. Differentiation of polynomial, rational, trigonometric, logarithmic and exponential functions. L'Hopital's Rule. Prerequisite: acceptable placement score (or ACT math score of at least 28), or at least 3 years of high school algebra and trigonometry with at least a B average, or a grade of C or better in MATH 180. General Education course: G9.

Text: *Calculus: Concepts and Contexts*, 3rd Edition. By: James Stewart. Publisher: Thompson, Brooks/Cole, 2005.

Workload: Calculus can be a demanding but fun course. It requires a lot of time and effort. You must have enough time (at least 2 hours per day after we meet) to study and do homework and prepare for the next class.

Course Content
We will cover the following material from the text:

Chapter 1	Functions and Models
Chapter 2	Limits and Derivatives
Chapter 3	Differentiation Rules
Chapter 4	Applications of Differentiation

Technology
I urge you to either purchase or borrow a graphing calculator if you do not already have one. I think a TI-84 type calculator would be a good one for this course. I will frequently use the overhead display unit with a TI-84 as we work through the material.

Graded item

Participation and attendance	5%
Four midterm exams	60% total
Quizzes and homework	15% total
Comprehensive Final Exam (Wed, May 6, 9:50 a.m.)	20%

Grading

90% and above	A
80 – 89%	B
70 – 79%	C
60 – 69%	D

Homework and Quizzes
Quizzes will be held on a weekly basis. These are to be held at the beginning of class – they will typically be one of the odd numbered problems from the text, and will be closed book, closed notes. Homework will be collected on a regular basis – generally every class period. Late homework will not be accepted without prior approval. If you cannot be in class, you can place your solutions in the mail slot of my door before the time they are due. Of all the homework and quiz scores, the lowest three will be dropped. For this reason, no make-up quizzes or group assignments will be allowed even if you have a valid reason or let me know ahead of time.

For each section covered, I will provide a list of recommended problems for you to practice, and a list of even-numbered problems for you to turn in for credit. The assignments for the first week or so, for example, are below:

Due Date	**For Practice**	**To Turn In**
Thurs 1/15	1.1 (1, 5 – 31odd, 41, 43, 49, 57, 59)	1.1 (18, 26, 28, 44, 48, 58)
Fri 1/16	1.2 (1, 3, 9, 11, 13, 15, 19)	1.2 (2, 8, 18, 20)
Mon 1/19	1.3 (1 – 61odd)	1.3 (4, 26, 42, 58)
Wed 1/20	1.4 (3 – 31odd)	
Thurs 1/21	1.5 (1 – 21odd)	1.5 (4, 14, 18, 26)
Fri 1/22	1.6 (1 – 51odd, 57, 59)	1.6 (16, 18, 22, 34, 48, 58)

The list of recommended problems in the daily assignments should give you a basic idea of the types of problems you will be expected to solve. If you can convince yourself that you understand the particular topic well enough to do all the problems listed, you might not have to actually work them, but you should at least work enough to test yourself.

The homework assignments are in fact the *KEY* to learning the material and therefore to success in the course. I cannot overstate this – you cannot learn the material unless you practice. The single biggest mistake a math student makes is to look at a problem and say, "I think I can do this," without actually trying it. These are the students who say, "It looks easy when you do them in class, but on the exam I 'blanked'."

My teaching style includes discussion and question-answering. When we cover a section, the assignment will typically be due two class periods after the lecture. I plan to answer questions on the assignment on the day between the lecture and the due date. You will only have questions to ask if you have put in the time trying to work the problems. Only then will you specifically know what you don't yet understand.

As a rule of thumb, university students should expect to put in about TWO HOURS of study outside the classroom for every hour in the classroom. I know many students do not do this, but if you want to be successful here you should try to map out something like 8 (EIGHT) hours per week to study mathematics.

Exams
A single side of a sheet of notes and a calculator are usually allowed for exams. The sheet of notes typically cannot include worked out example problems. All tests must be taken in the regular classroom at the scheduled times. I will replace your lowest test score with your final exam score if it is better. If your final exam score is lower than all four regular tests, then no adjustments will be made.
For this reason, I will not allow students to make-up tests for any reason. The final exam will be held Wednesday, May 6, at 9:50 a.m. This exam must be taken at this time unless approved in writing by the Dean.

Participation
I will count actively participating in class as 5% of your grade. During class I will often give problems for you to work on during a lecture – always feel free to consult with others during this time. Other times I will assign group work to complete in class. There is plenty of research that shows that cooperative learning has major benefits on grades and retention of information.

Cheating The first occurrence will result in a zero being recorded; the second will earn the student an F in the course.

Where to get help
Since this is mathematics, you will probably get stuck often. Don't panic, this is all part of the learning process. You will likely need a support group which may include other students or tutors. The Learning Center has tutors available and is located in MRC 332. I also encourage you to make use of my office hours – please feel free to stop by any time!

Course Goals and Objectives
Because this course may be taken as part of the General Education requirements, the specific General Education Core Abilities are listed:

(a) Thinking: Students engage in the process of inquiry and problem solving.
- Briefly study the basic ideas of a first algebra course.
- Solve quadratic equations by factoring, completing the square, and by use of the quadratic formula.
- Improve the ability to read and solve application problems by means of constructing appropriate algebraic models and then applying algebraic techniques to find a solution.
- Explore exponential and logarithmic functions, including application problems, and the efficient and appropriate use of logarithms and their properties.
- Learn the techniques of solving systems of equations and appropriately apply these processes to word problems.

(b) Ethical Decision Making: Students respond to ethical issues, using informed value systems.
- Understand how academic honesty in mathematics requires deductive reasoning.
- Students honestly challenge themselves to understand the material.
- Practice academic honesty in mastering the material for the course on one's own without cheating.

(c) Communication: Students speak and write to suit varied purposes, audiences, disciplines, and contexts.
- Communicate solutions to problems in writing on assignments, quizzes, and exams, using appropriate mathematical language and format.
- Read text and reference materials outside of class.
- Actively listen and interact with the instructor and other students during course lectures.
- Use calculators to solve problems and communicate solutions.

Americans with Disabilities Act (ADA):
If you have a diagnosed disability and require services or accommodations for this class, please inform me and Jane Eddy, the disabilities (ADA) coordinator (MRC 332; 796-3194) within 10 days to discuss your needs