M CC 141 Calculus in Management Sciences **Fall 2007**

sec 3 4:00 – 5:50 PM MWF (8/20-12/7) **PLSCI C101**

Instructor: Lori Ziegelmeier **Office:** Weber 10 **E-mail**: ziegelme@math.colostate.edu

Course Coordinator: Dr. Kelly Chappell, Weber 111, 491-6416, chappell@math.colostate.edu

Course Website: http://www.math.colostate.edu/~chappell/M141/Fa07/indexFa07.html

Office Hours: Check website for times and locations.

Registration Deadlines: Last day to add or "free" drop: Wednesday, September 5
Last day to W-drop: Monday, October 15

Textbook: Bittinger. *Calculus and Its Applications*. 9th edition.
A copy of the text is on reserve in the library. Bring your textbook to class every day.

Calculator: A graphing calculator is recommended. The instructor will use a TI-83 or TI-83 Plus during lecture and office hours. These calculators as well as the TI-82, TI-83, TI-84, or TI-86 are allowed to be used on exams.
Not allowed: TI-89, cell phones, laptops, or any calculator with a QWERTY keypad.
Some questions on exams will require a calculator. Bring your calculator to class every day.

Homework: Doing regular homework is essential to your success in this course. You need to invest quite a bit of your time in practicing problems, and you need to do it on a regular basis. Keep up with the syllabus and the lectures. This means that you will have some homework every day. A set of selected homework problems is on the section website. In addition to these selected problems, you are encouraged to work additional problems from the relevant text section as needed to have a thorough understanding of the material. Answers to the odd-numbered problems are given at the back of the book, starting on page A-1. You should compare your own answers with the answers given in the book, and be sure to clear up any discrepancies.

Attendance: Daily attendance is expected. There may be periodic unannounced quizzes in class. More details about these quizzes will be given during the first day of class.

Exams: There will be four exams given, three in-class exams and one final exam, location TBA. The exam dates are September 12, October 10, November 7, and December 12. See the website for Exam Rules *before* the first exam.

Exam Time Conflicts: If you have an ***unavoidable, documentable*** conflict with an exam, notify Course Coordinator and the Instructor *in writing* at least one week before the exam. Include your e-mail address and phone number. If your request to take the exam at another time is approved, another time will be arranged when you may take the exam.

Special Needs: Students who have special needs, including special accommodations for taking exams, should discuss their situation as soon as possible with their instructor. Students who have used RDS (Resources for Disabled Students) for other classes find that their services are very helpful for M141. If you use RDS, please make arrangements as soon as possible.

Grading Standards: Your grade in this course depends entirely on the four exams. Exams are 100 points each. For each student, the lowest-score exam counts half as much as the other three exams, which count equally. See the course website for an example. Final grades will be determined from point totals using a grading scale *no more restrictive* than the following:

630 – 700	A
560 – 628	B
490 – 558	C
420 – 488	D
0 – 418	F

Academic Appeals: Concerns about the course or any of the instructor's decisions that affect your participation in the course should first be discussed with the instructor. Issues that cannot be resolved with the instructor should be discussed with the Course Coordinator. Concerns regarding the course may also be discussed with the Prof. Gerhard Dangelmayr, Undergraduate Director of the Mathematics Department, WB 101.

How hard is the course? The course does require a definite commitment of time and effort, but it is not too hard, provided you have the required command of algebra, keep up in class, do homework problems every day, clear up questions and difficulties as soon as they arise. Of course, some students find the course harder than others, but serious grade trouble usually arises either from poor preparation in algebra, lack of attendance, or falling behind (including homework).

If something is unclear in lecture:	**If you have other questions about the course:**
1. Ask during class	1. Check the course/section website
2. Ask during office hours	2. Ask during office hours
3. Email Lori	3. Email Lori

M 141 Topic Outline & Tentative Schedule

Syllabus of Lectures

Date	**Day**	**Lesson**	**Topic**
8/20	1	1	Introduction to course
8/22	2		(1.3, 1.4 Rates of Change, Difference Quotient, Derivative)
8/24	3		
8/27	4	2	1.1, 1.2 Limits and Continuity
8/29	5	3	1.4 Difference Quotient (more examples using limits)
8/31	6	4	1.5, 1.6, 1.7 Differentiation Techniques (Rules)
9/5	7		
9/7	8	5	2.6 Marginals and Differentials
9/10	9		Supplementary Material, Review for Exam I
9/12	10		Exam I
9/14	11	6	2.1 First Derivative Test for Local Extrema
9/17	12	7	1.8, 2.2 Higher Order Derivatives, Second Derivative Test
9/19	13		
9/21	14	8	2.4 Absolute Extrema
9/24	15	9	2.5 Optimization (Maximum-Minimum Problems)
9/26	16		
9/28	17	10	2.7 Implicit Differentiation and Related Rates
10/1	18		
10/3	19		
10/5	20		Supplementary Material (2.3: Asymptotes and Rational Functions), Review for Exam II
10/8	21		Review for Exam II
10/10	22		Exam II
10/12	23	11	3.1, 3.2 Exponential and Logarithmic Functions
10/15	24		
10/17	25	12	3.3, 3.4 The Growth Model
10/19	26	13	4.2 Anti-differentiation
10/22	27	14	4.1, 4.2, 4.3 Limits of Sums, Area and Definite Integrals
10/24	28		
10/26	29		
10/29	30	15	4.4, 4.5 Techniques of Integration: Properties and Substitution
10/31	31		
11/2	32		Review for Exam III
11/5	33		Review for Exam III
11/7	34		Exam III
11/9	35	16	5.1 Consumer’s Surplus and Producer’s Surplus
11/12	36	17	5.2 Integration of the Growth Model
11/14	37	18	5.4 Probability
11/16	38	19	5.5 Expected Value
11/26	39	20	6.1-6.2 Functions of Several Variables, Partial Derivatives
11/28	40	21	6.2 Higher Order Partial Derivatives
11/30	41	22	6.3 Max-Min Problems
12/3	42		
12/5	43		Supplementary Material (5.3: Improper Integrals), Review for Exam IV
12/7	44		Review for Exam IV
12/12			Exam IV, 7:00-9:00 AM, Location TBA