Semester / Year: Fall 2006

Lecture Hours: 4

Lab Hours: 0

Credit Hours: 4

Class Time: 12:00 – 12:50 p.m.

Days: M-Th

Room: PS 317

Instructor’s Name: Debra Swedberg

e-mail: swedberg@caspercollege.edu

Instructor’s Office #: PS 343

Office Hours:
M-TH 10-11:50 AM, 1-1:50
F 10-11:50

Phone: 268-2251

Contact Information: MY OFFICE, PS 343 –
either in person or by phone (268-2251), e-mail
(swedberg@caspercollege.edu). Also, we have the
MATH LEARNING CENTER (MATH LAB) located in
PS 104. Open 7am - 7pm MTWTh and 7am – 3pm
Fridays.

Course Description: The study of single variable calculus emphasizing applications in business, social and
behavioral or life sciences.

Extended Course Description: This class is designed to be an introduction to the techniques and applications
of calculus and data analysis. This is most definitely an applied calculus course with our focus on the
applications of this subject area and not the theoretical development (take 2200 if this is your main interest).
Calculus is often called the mathematics of change. You will, hopefully, understand the inner workings of how
things change and build systematic ways to use this understand in everyday situations. The emphasis of this
course will be on understanding concepts instead of developing algebraic skills. This course will use “real life”
problems and not textbook mathematics and will emphasize the use of technology to free you from tedious tasks
to help you think and reason.

Statement of Prerequisites: A grade of “C” or better in MATH 1400 or an ACT Math score of 27 or better or
an appropriate COMPASS exam score within the past year.

Goal: This class is designed to help you be successful in your Junior and Senor level business classes; to
help you become astute from a global perspective with regards to data; to be more of a critical thinker,
evaluating projections and validity of a chosen model.

Outcomes: Specifically we will cover chapters 1-5 in the textbook. We will begin with a study of math
modeling and functions and lead into a discussion of rates of change which will lead to the concept of the
derivative. We will then look at the many ways that the derivative can be applied to many situations. As was
indicated in the discussion of general objectives above, this is an applied course and all of our work will be in the
context of applied problems. We will learn how to use a modern analysis tool (a graphing calculator – the TI-83
is what we strongly recommend in this course and any statistics course at Casper College, but there are other
calculators that work including but exclusively limited to the TI-82, TI-85 and TI-86) to help us analyze all the
situations above.
Methodology: This class is listed on a week by week basis. I will give you an assignment sheet for each of the chapters. I will expect you to do these problems and ask any questions that come up in the process. In general, you are expected to attend class and read the material in the book, do the homework (which you don’t have to turn in as it is not part of your grade), take the quizzes, complete projects and exams.

Evaluation Criteria: Your grade in this course, will be determined by scores on tests, quizzes, projects and a final project.

- **Homework** is assigned for every section but will not be collected. Please do these problems or as many of them as you feel are necessary to understand the information in that section. Please be sure to ask any and all questions that you have from these. I will use homework questions on quizzes. That is how I will know how you are doing on the homework. There will be four tests in this course. Test dates are given on the schedule. I will state the date that each will be posted on the chapter assignment sheets. You will be expected to use your calculator on quizzes and tests.
- **Quizzes** will be given every half chapter or so – they are a “how-ya-doin’” kind of activity before we get to the exam situation.
- **Projects** are more in-depth assignments. Projects are situations where you get to use the math you are learning in that section or chapter to solve a real life problem and discuss your knowledge in written form. More information will be provided closer to the first date (see schedule).
- **Final project** – there will be a final project in lieu of a final exam. That just seems to work better in this type of class setting – stay tuned!

YOUR GRADE IN THIS COURSE WILL BE DETERMINED AS FOLLOWS:

I will take your quiz scores and compute an average. This percentage will equal one test score or 100 points.

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<th>Test</th>
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<td>Projects</td>
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<td>Final Project</td>
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You are guaranteed a traditional college grading scale of:

- 90%+ A
- 80-89% B
- 70-79% C
- 60-69% D
- 59 and below F

You will need 70% or better to successful in this class.

Required Text, Readings, Materials:

- **Calculus Concepts: An Informal Approach to the Mathematics of Change** Third Edition by Latorre, Kenelly, Fetta, Reed, Harris and Carpenter. You may find Used copies of this textbook. If you want to purchase this textbook from the Casper College Bookstore, their information is as follows: phone 307-268-2202 or online at 184_casper_WY@fcs.follett.com.
- **Calculator.** It is a requirement that you have a graphing calculator for this course. Not only do you need one that will graph functions, but it must also be able to handle lists of data for plotting and looking at
regression lines. These cost $60-$100. You may also purchase a calculator from our bookstore (see above). There are many brands which are acceptable, but the TI-83 will be strongly recommended and will be used on the calculator pages for this class website. If you find the price too prohibitive, please consider these options:

1. You may rent a TI-83 calculator. This means you can use the calculator for the semester. All you have to do is check out the calculator and fill out a form and pay a rental fee. You may do this through the Math Lab, PS 104 or call 268-2865.

2. The math department has set up a “Calculator Selling Board” outside of the Math Lab. This means that if you want to buy or sell your calculator before/after the end of the course – here is a mechanism for you to do so.

3. If you intend to go on in mathematics or statistics these calculators will be invaluable. So you can consider it a long-term investment.

If you have any questions about calculators, please do not hesitate to ask.

Last Date to Change to Audit Status or Withdraw with a W Grade:
Friday, November 3, 2006

Student Rights and Responsibilities:
Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

If you have a complaint, problem, suggestion, etc. concerning this course, please consult with me, the instructor, first. If we can't resolve the issue, we will then consult with the chair of the math department and the chair of the Physical Sciences division.

It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment to see a Casper College counselor at your earliest convenience.

Chain of Command: If you have any problems with this class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take your problem through the appropriate chain of command starting with the department head, then the division chair, and lastly the vice president of academic affairs.

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honestly. Proven plagiarism or any form of dishonestly associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct.

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment to see me at your earliest convenience.

Schedule
Week #1 beginning 8/28: Chapter 1
Week #2 beginning 9/4: Chapter 1
Week #3 beginning 9/11: Project #1 (#1.2)
Week #4 beginning 9/18: Chapter 2
Week #5 beginning 9/25: Chapter 2, Exam #1
Week #6 beginning 10/2: Chapter 3
Week #7 beginning 10/9: Chapter 3
Week #8 beginning 10/16: Exam #2
Week #9 beginning 10/23: Chapter 4
Week #10 beginning 10/30: Chapter 4
Week #11 beginning 11/6: Project #2 (#4.1)
Week #12 beginning 11/13: Exam #3
Week #13 beginning 11/15: Chapter 5
Week #14 beginning 11/27: Chapter 5
Week #15 beginning 12/4: Exam #4
Week #16 beginning 12/11: Final project due 12/15 (see list of possible choices)