

Date: Fall 2013

Course Title: Calculus for Business and Social Science

Course Number: MTH 180

I. Faculty Information

- A. Instructor: D. Monbrod
- B. Office Location: 4148 U
- C. Mailbox Location: 4148
- D. Phone: 708-596-2000 ext.2342
- E. Office Hours: _____
- F. Email: dmonbrod@ssc.edu
- G. Website course info page: <http://learn.ssc.edu/dmonbrod>

II. Course Identification

- A. Credit Hours: 4
- B. Total Contact Hours: 4 – Lecture; 0 – Lab
- C. Days/Hours/Place Course Meets: TTR 5:00-6:40PM Room 4254
- D. Prerequisite: Qualifying score on the math placement test or MTH 165 with a grade of “C” or better, and successful completion high school geometry or MTH 096 with a grade of “C” or better.
- E. Course description: This course is designed specifically for students in business and the social sciences with emphasis on applications of basic concepts rather than on proof. Differentiation and integration of algebraic, exponential and logarithmic functions with coverage of applications relevant to business and social sciences.

III. Textbooks/Supplies

- A. Required: MyMathLab access code and a valid email address.
- B. Optional: Barnett, Raymond A., Ziegler, Michael R., Byleen, Karl E., Calculus for Business, Economics, Life Sciences, and Social Sciences, 12th Edition, Prentice Hall, 2011.
- C. Required: Graphing calculator, preferably TI83-84 model. No symbolic manipulators allowed.
- D. Recommend graph paper for parts of course.
- E. Course id for registration into MyMathLab: monbrod13405

IV. Course End Competencies

The Student will be able to:

- A. Give definitions of limits, derivatives, antiderivatives, and definite integrals.
- B. Identify the relationships between limits, derivatives, antiderivatives, and definite integrals.
- C. Find derivatives of algebraic, exponential, and logarithmic functions.

- D. Find integrals, both definite and indefinite, and use them in applications.
- E. Use a calculator to find numerical derivatives and integrals.
- F. Demonstrate proper use of symbols and notation used in calculus.
- G. Translate symbols into verbal form and verbal form into symbolic form.
- H. Give meaning of symbols in own words and use symbols in a new situation.
- I. Translate calculus problems into symbolic form.

V. Classroom Policies/ Procedures

- A. No food or drink is allowed in the classroom.
- B. Attendance will be taken daily.

Attendance factors into class participation will be taken into account in borderline course grade situations. If you must miss a class, it is your responsibility to find out what you missed that day on your own time not during class

D. Tardiness and things related:

- Keep in mind that most quizzes will be given at the start of the class period, and no extra time will be given to late starters.
- If a quiz or test is in progress when a student comes in late, that student will not be given extra time to work on the quiz or test.
- If a student arrives late during a test after another student has finished his test and left the room, the late student will not be allowed to take the test and will receive a zero on that test.
- Because it is inconsiderate, and potentially disruptive to class members, no one is allowed to leave the room during class or during a test (unless he/she is finished with the test) without permission from the instructor.

E. Cheating: All graded work including tests, quizzes, assignments, and homework is to be done by the individual student alone unless it is stated that group work is allowed. If it is determined that a student is involved in cheating, that student will receive a score of zero (0) on the test/quiz/assignment for the first incident. A zero awarded for cheating on a test or quiz cannot be considered a low score to be dropped. A student's second incidence of cheating will result in a failing grade (F) for the course. Take home assignments are to be done by the individual alone unless stated otherwise. Tests and quizzes are assumed to be closed-book and closed-note. If and when a test or quiz is given in class online, students are not allowed to visit any websites besides CourseCompass and are not allowed to use CourseCompass as a resource to find answers to a test or quiz questions. In addition all students must adhere to SSC's **Academic and Student Codes of Conduct**.

F. The following rules are in place so that the educational process in the classroom is uninterrupted:

- **Phones and all other mobile or electronic devices should be turned off while in class.** All electronic devices need to be turned off and be kept off the desks and out of sight during class. This includes phones, pods, mp3 players, disk players, etc.
- No eating food or drinking beverages is not allowed in the classroom. This is to help keep the classroom free of garbage, spills, and bugs, and it is a college-wide policy.
- No sharpening pencils (with the classroom wall sharpener) after class has begun.
- Talking loudly (at a level that interferes with the instructor's speaking) while the instructor is speaking to the class or while a student is trying to talk to the instructor during a classroom discussion is not allowed.
- Talking during a test or quiz is not allowed.
- Sleeping is not allowed. If you are sleeping you will be marked absent and may be asked to leave.
- Children are NOT allowed in the classroom and are NOT to be allowed in hallways unless accompanied by an adult. Check the college's daycare center for its hours and rules of operation if you are in need of temporary childcare.

VI. Grading

- A. **Homework:** Homework will be done using MyMathLab. You should try to complete as much of the assigned homework as possible before the next class meeting. Even though you will enter your answers on the computer, you should complete the homework in an organized fashion, perhaps in a spiral notebook. This will serve as a reference for studying purposes and will be helpful when you study for a test or quiz. Your progress on the homework exercises will have a big impact on your success in this class, as we will discuss some of the homework in class and you will be tested and quizzed on the underlying concepts covered in the homework exercises. Higher homework scores almost always translate to higher tests scores and better course grades.
- B. **Quizzes:** There will be several quizzes (6-10) given in class throughout the semester. These quizzes will normally be given about every week-and-a-half, and they may or may not be announced in advance. Quizzing may be online. **NO MAKE-UP QUIZZES WILL BE GIVEN FOR ANY REASON. NO EXCEPTIONS.** *The two lowest scored quizzes will not be counted in the quiz average.*
- C. **Tests:** There will be 5 unit tests and a comprehensive final exam. Tests will be announced approximately a week in advance. **NO MAKE-UP TESTS or EXAMS WILL BE GIVEN FOR ANY REASON. NO EXCEPTIONS.** *Your lowest scored test will not be counted in the course grade.* Testing may be online. When multiple choice scantron tests are given, after a test is turned in, you will not be allowed to change the scantron answers for any reason.

Make sure you select the answer you want before you turn in the test. If necessary ask the instructor for a new *scantron* sheet if you are in doubt about the condition and readability of your *scantron*. **The final exam is mandatory** and comprehensive. The final exam cannot be dropped.

D. **Extra Credit:** None planned for this class.

F. Course Grade:

Percent Breakdown		Scale Used	
Tests	60%	A	90-100%
Quizzes	5%	B	80-89%
Homework	10%	C	70-79%
Final Exam	25%	D	60-69%
		F	below 60%

VII Help.

A general rule of thumb is to devote an average of 2 hours outside of class for every 1 hour the class meets. For a 4 credit hour class this means 8 hours per week outside of class. This is an average, so sometimes you will spend less than 8 hours, and sometimes you will spend more. Attempt homework and ask questions in class. Free tutoring is available in the Academic Assistance Center (2264). Discuss homework with your classmates when possible. Forming study groups can also be helpful. We may not have time to answer all of your questions regarding homework during class. See me before or after class for extra help. Do not wait until you are failing before you seek help. Also try to utilize available tutorial and practice materials at the CourseCompass web site.

VIII. Schedule/Outline*

Tuesday	8/20	3.1 Limits
Thursday	8/22	3.2 Infinity and limits
Tuesday	8/27	3.3 Continuity
Thursday	8/29	3.4 The derivative
Tuesday	9/3	3.5 Basic rules
Thursday	9/5	3.6 Differentials and 3.7 Marginal analysis
Tuesday	9/10	4.1 Continuous compounding, 4.2 Derivatives of exponential and log functions
Thursday	9/12	Test 1 on Chapter 3 (Chapter 3 HW Due)
Tuesday	9/17	4.3 Product and Quotient Rules
Thursday	9/19	4.4 Chain Rule
Tuesday	9/24	4.5 Implicit differentiation
Thursday	9/26	4.6 Related rates , 4.7 Elasticity of demand
Tuesday	10/1	5.1 First Derivative and graphs
Thursday	10/3	Test 2 on Chapter 4 (Chapter 4 HW Due)
Tuesday	10/8	5.2 Second Derivatives and graphs
Thursday	10/10	5.3 L'Hopitals Rule (finding limits)
Tuesday	10/15	5.4 Curve sketching with calculus
Thursday	10/17	5.5 Absolute maxima and minima
Tuesday	10/22	5.6 Optimization
Thursday	10/25	6.1 Antiderivatives
Tuesday	10/29	6.2 Integration by substitution
Thursday	10/31	Test 3 Chapter 5 (Chapter 5 HW Due)
Tuesday	11/5	6.3 Growth and decay and 6.4 The definite Integral
Thursday	11/7	6.5 Fundamental Theorem
Tuesday	11/12	7.1 Area between curves
Thursday	11/14	Test 4 on Chapter 6 (Chapter 6 HW Due)
Tuesday	11/19	7.2 Econ and Business applications
Thursday	11/21	7.3 Integration by parts
Tuesday	11/26	7.4 Integration using tables
Thursday	11/28	No Class. Thanksgiving Holiday
Tuesday	12/3	Review-wrap up
Thursday	12/5	Test 5 on Chapter 7 (Chapter 7 HW Due)
Tuesday	12/10	Final Exam 5- 6:50pm
Thursday	12/12	Class does not meet

* Instructor reserves the right to alter the schedule if necessary to meet the needs of the class.

Math 180 Survey/Agreement

After filling out this form, sign it and return it to the instructor.

Student Information (please print)

Name: _____

email: _____

Most recent math class taken: _____

When: _____

Where: _____

Final grade received: _____

Intended major: _____

Your next intended math course: _____

Average hours per week you plan to spend doing math homework: _____

Pertinent comments:

Agreement

I have read and/or understand this syllabus and agree to abide by the rules, guidelines, and conditions outlined in it.

Student's Signature _____ Date _____