**Math 1309 – Section 01- Sp2012**
**Calculus for Business and Social Sciences**
**MWF 11:00 - 11:50, Dedman Life Science 131**


**Instructor: Adriana Aceves** **Office: Clements 208A**
**Office Hours: M 10:00-10:50** **Phone Number: (214) 768 - 1886**
**T Th 9:30-11 and 3:30-4:30, or by appointment** **Email: acevesa@smu.edu**


**Text:** College Mathematics for Business, Economics, Life Sciences and Social Sciences; Barnett, Ziegler, and Byleen
**Calculator:** TI 83 Plus recommended, not required

**Please note the following guidelines for the course.**

**- Learning Outcomes:**

1. Students can demonstrate the ability to understand, critique, and draw conclusions from numerical arguments and data (GEC outcome).
2. Students can differentiate polynomials, exponentials, logarithms, products, quotients, and composite functions and integrate simple functions or composite functions using the substitution rule.
3. Students can solve optimization problems including setting up the equations, solving them, and analyzing the results.
4. Students can determine the shape of a graph (increasing, decreasing, and concavity) from first and second derivatives and sketch graph.

**- Grades:** Your grade will be based on the following

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|---|---|
| 3 in class tests: | 60% |
| Final exam: | 30% |
| Quizzes and assignments: | 10% |

- **Calculator policy**: Graphing calculators may be used on tests and quizzes but ALL WORK must be showed to receive credit for any answer. A scientific calculator may be necessary on tests, including the Final Exam.

**- Homework:** Your homework is your most important effort in this class; homework is how you actually learn the material that will be on the quizzes and exams. Expect to do 2-3 hours of homework for every hour of class meeting time (on average 10-15 hours per week). Keep all of your homework together in a folder so that if you have questions about the material, you can take it with you when you go to see your instructor or get tutoring.

**- Attendance:** is mandatory, and if you have three or more unexcused absences, you may be dropped from the class. Please refrain from leaving class early unless you have a valid reason, in which case you must inform your instructor at the beginning of that period.

Students participating in an officially sanctioned, scheduled University extracurricular activity will be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work.

Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence.

**- Missed Exams:** Test dates are specified on the syllabus below**.** If you miss an exam, contact your instructor immediately. Make-up tests will only be given in appropriate circumstances (illness, family emergencies, religious and university-sanctioned activities) and only within one week of the original date of the test. If you miss an exam and do not contact your instructor immediately, you will be dropped from the class. Reviews for midterm exams will be posted on blackboard and are due at the time of the test.

**- Student Behavior**: Students must adhere to the SMU Code of Conduct. Student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action. This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner towards the instructor and their fellow students.

**- Students with Disabilities**: Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or visit http://www.smu.edu/alec/dass.asp to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements.

**- Help Sessions**: M-Th 4:30-7:30, 225 Clements Hall. All students in this class are strongly encouraged to attend. You can also seek help for this class at the ALEC

**Final Exam**: Friday, May 4, 8:00 AM -11:00 AM

| Week of | Topic | Homework |
|---|---|---|
| Jan 16 | **MLK Day, Monday Jan 16 – No class**<br>10.1 Introduction to Limits<br>10.3 Continuity | <br>1,3, 5, 11, 13, 17,21, 27,29, 43,45,53,55,57<br>1,5,11,15,19,22,35,41,43,59,77 |
| Jan 23 | 10.2 Infinity and Limits<br>10.4 The Derivative | 1-8,9, 11,13,21,23,25,33,35,37,41,43,47,61,69,71<br>3,5,7,9,19,31-39 (odd),63 |
| Jan 30 | 10.5 Basic Differentiation Properties<br>10.7 Marginal Analysis<br>11.1 Exponential and Log Functions (Review) | 1-17 (odd),27,29,35,39,43,49,69,73,81,84<br>3,5,7,11,13,15,17,25,27,31,35,39,43<br>Review problems from section 11.1: 19,24,25 |
| Feb 6 | 11.2 Derivatives of Exp and Log Fnctns<br>11.3 Product and Quotient Rules<br>11.4 The Chain Rule | 1,3,7,11,15,17,19,25<br>1,3,5,13,21,23,49,55,57,59,83<br>1,3,19-39 (odd), |
| Feb 13 | 4.4 The Chain Rule (Contd.)<br>Review for Test 1<br>**Test 1: Friday, February 17** | 43,45,47,53,55,58<br>Review 1 due at time of test |
| Feb 20 | 15.2 Partial Derivatives<br>12.1 First Derivative and Graphs<br>12.2 Second Derivative and Graphs | 3-17 (odd),35,37,45,47,57,59,60<br>1-8, 11-17 (odd), 19,21,23,27,29,31,35,37,38,47,49, 55,57<br>1,3-6,19,21,25,27,31,33,35,36,85,86,89,91 |
| Feb 27 | 12.3 L'Hospital's Rule<br>12.4 Curve sketching | 1,7,13,15,17,19,21,23,25,27,47<br>17,25,45,48,49,51,76 |
| March 5 | 12.5 Absolute Max and Min<br>12.6 Optimization | 17,21,27,33,37,43<br>11-14 |
| March 12 | **Spring Break, March 12 - 16** | |
| March 19 | 12.6 Optimization (contnd)<br>12.1 Antiderivatives<br><br>Review for Test 2<br>**Test 2: Friday, March 23** | 17-20<br>9,11,13,15,19,21,23,31-34,35-57 (odd),61, 63, 65, 69<br>83,85,87,88,89<br>Review 2 due at time of test |
| March 26 | 13.2 Integration by Substitution<br>13.5 Fundamental Theorem of Calculus | 5,8,9,11,15,21,25,27,33,35,55,57,59,67,69,71 |
| Apr 2 | 3.1 Simple Interest<br>3.2 Compound Interest<br>**Apr 4 – Last day to drop**<br>**Apr 6 – University holyday, no classes** | 33-39 (odd), 47, 49, 53<br>35, 37, 43, 45, 47, 53, 61, 63, 65, 75 |
| Apr 9 | 3.3 Future Value<br>3.4 Present value | 21-27(odd), 33<br>21, 23, 25, 31, 37, 39 |
| Apr 16 | Review for Test 3<br>**Test 3: Friday, April 20** | Review 3 due at time of test |
| Apr 23 | 7.1 Area between Curves<br>14.2 Applications in Business and Economics | <br>21, 25, 29, 31, 43, 47 |
| Apr 30 | Review for final exam<br>May 1st – last day of instruction (follows Friday schedule) | |
| May 4 | **Final Exam 8:00 – 11:00 AM** | |