Math 160: BRIEF CALCULUS
MW 4:00 p.m. – 5:50 p.m.
4 Credits – Spring 2009

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1. Course Description: This course is designed for students with business, social science and life science majors. It covers functions, limits, continuity, derivative, maxima-minima, applications of the derivative, exponential and logarithmic functions, functions of several variables, maxima and minima of functions of several variables, integration, and applications of the integral.

2. Prerequisite: MATH 143 or MATH 147 with a grade of "C" or better.

3. Required Textbook and Supplies:
   b. Calculator: TI-83 (plus) or TI-84 (plus) graphing calculators are required.
   c. Supplies: 3-ring binder with dividers, paper, pencil, stapler.

4. Course Objectives: To give the student a strong understanding of the topics mentioned in the Course Description and Topical Outline in order to prepare them for MATH 230 or other higher-level mathematics courses with a Brief Calculus prerequisite.

5. Outcomes Assessment:
   Students: Daily assignments, chapter tests, and a comprehensive final exam will be used to assess how well students achieve the expected course outcomes. Exams as well as student evaluations will be analyzed to help improve curriculum and instruction for the course. Also, regular informal feedback will be solicited in an effort to improve the class as it progresses.
   Department: As part of departmental analysis of outcomes in this course and its place in the Mathematics program, student completion of the pre-requisite, success in the current course, success in subsequent courses and student satisfaction will be reviewed by the instructor and the department chair. A report containing this information will be submitted by department faculty to determine what, if any, changes can be made to improve the course in terms of content, focus, and instruction.

6. On-line Course Evaluations: To help instructors continually improve courses, students are strongly encouraged to go online to http://evaluation.csi.edu and complete anonymous evaluations which open two weeks before the end of the course and close the last day of class. When students enter the site, they find evaluations for their enrolled courses. Thank you for this valuable input!

7. Disabilities: Any student with a documented disability may be eligible for related accommodations. To determine eligibility and secure services, students should contact the coordinator of Disability Services at their first opportunity after registration for a class. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus. 208.732.6250 (voice) or 208.734.9929 (TTY), or e-mail Candida Mumford, cmumford@csi.edu.

8. Student e-mail: Since email is the primary source of written communication with students, all registered CSI students get a college email account. Student e-mail addresses have the following format: username@students.csi.edu. Students can check their CSI e-mail online at http://students.csi.edu. Instructors and various offices send messages to these accounts. Students must check their CSI e-mail accounts regularly to avoid missing important messages and
deadlines. At the beginning of each semester free training sessions are offered to students who need help in using their accounts.

9. Policies and Procedures:
   a. Attendance: Attendance is essential to student success. If you miss a class, you are responsible for material discussed in class as well as any additional assignments and announcements made during class time.

   b. Homework: Assignments will be given daily and will be collected at the next class meeting. Be sure to read each section before attempting the homework. Late homework will not be accepted under any circumstances. It will be given no credit if turned in after I have collected homework during the first part of class. If you have a planned absence, you may turn homework in early. Your overall homework average can be used to replace one chapter exam score.

   c. Exams: Five exams and a comprehensive final will be given. Exams will be taken in the Campus Testing Center (GRM 230). The final will be taken in the classroom with the instructor present. Make-up exams will NOT BE GRANTED unless you have a medical excuse validated by a doctor or the consent of the instructor at least one week prior to the exam. Make-up final exams will NOT BE GRANTED UNDER ANY CIRCUMSTANCES. You may drop your lowest chapter exam score and replace it with your homework average.

   d. Academic Integrity: If a student is caught cheating on an exam or copying another student’s assignment, a student will be subject to a failing grade (0 credit).

   e. Classroom Behavior: You as a student are expected to maintain good conduct during class, treating fellow students with respect and demonstrating a cooperative attitude toward the instructor. Inappropriate behavior will not be tolerated. After one warning, further breaches in acceptable conduct will result in your being dropped from the course, and the matter will be referred to student services for college discipline. If there is a situation creating a problem for you in this class, please let me know so that I can conference with any students who are involved. Information regarding student Behavior Policies can be found on p. 31 and 32 of the C.S.I. catalog. See also the Code of Conduct in the Student Handbook.

   f. Other Policies: All cell phones and pagers must be turned off or to a vibrate mode during class. No children are allowed in class.

10. Where to get help:
   - Ask questions in class or stop by to see me – I’m here to help you!
   - One-on-one instructor and peer tutoring are available at...
     - Math Lab (SHL 207)
   - Instructional DVDs come with new textbook purchases and are also available for check out at Library (GRM 131)
   - Study groups are a great resource and I encourage you to form them to do assignments, study for tests, etc.

11. Grading Practices:
   a. Testing Center: All chapter exams will be taken in the Testing Center. It is located in GRM 230 and is open from 8:00 am – 9:30 p.m. Mon.-Thurs. and from 8:00 a.m. – 5:00 p.m. on Fridays. A picture ID is required to take any test in the Testing Center. You cannot start a test in the Testing Center if closing time is less than one hour away.

This syllabus may contain errors. I reserve the right to correct omissions and errors.
b. Evaluation:

5 Exams OR 4 Exams + Homework Average: 500 points
Final Exam: 150 points
Total Possible: 650 points

90 -100% = A
80-89% = B
70-79% = C
60-69% = D
Below 60% = F

Students must score at least 60% on the comprehensive final exam to receive a course grade of C or higher.

c. It is the student’s responsibility to drop the course.

During the first two weeks of the term, a student may drop a course or completely withdraw without its being recorded on the student’s official transcript. After the first two weeks a “W” will be recorded in any course the student drops.

If you stop attending the course and do not withdraw, you will receive an F in the course.

12. Do not put off getting help! If you wait until you are totally lost, you might find it impossible to get back on track.

13. Keys to success in this class: Show up every day and pay attention; ask questions; practice by doing assignments and forming study groups; don’t quit!
### 14. Tentative topical outline:

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Date</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 21</td>
<td>Syllabus, 1.1 Real Numbers, Inequalities, Lines, 1.2 Exponents,</td>
<td>Mar. 23</td>
<td>Chapter 4 Review</td>
</tr>
<tr>
<td>Jan. 26</td>
<td>1.3 Functions, 1.4 Functions Continued</td>
<td>Mar. 25</td>
<td>5.1 Indefinite Integrals, 5.2 Integration of Exp. and Log</td>
</tr>
<tr>
<td>Jan. 28</td>
<td>2.1 Limits and Continuity</td>
<td>Mar. 30</td>
<td>5.3 Definite Integrals and Area</td>
</tr>
<tr>
<td>Feb. 2</td>
<td>2.2 Slopes, Rates, Derivatives</td>
<td>Apr. 1</td>
<td>5.4 Average Value and Area Between, 5.5 Economic Applications</td>
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<tr>
<td>Feb. 4</td>
<td>2.3 Differentiation Formulas, 2.4 Product and Quotient Rule</td>
<td>Apr. 6</td>
<td>Chapter 5 Review</td>
</tr>
<tr>
<td>Feb. 9</td>
<td>2.5 Higher-Order Derivatives, 2.6 Chain and Power Rule</td>
<td>Apr. 8</td>
<td>5.6 Integration by Substitution</td>
</tr>
<tr>
<td>Feb. 11</td>
<td>2.7 Nondifferentiable Functions, Chapters 1 &amp; 2 Review</td>
<td>Apr. 13</td>
<td>6.1 Integration by Parts</td>
</tr>
<tr>
<td>Feb. 16</td>
<td>President’s Day – No Class</td>
<td>Apr. 15</td>
<td>6.3 Improper Integrals</td>
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<td>Feb. 18</td>
<td>3.1 Graphing using 1st Derivative, 3.2 Graphing using 1st &amp; 2nd Der.</td>
<td>Apr. 20</td>
<td>6.5 Differential Equations</td>
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<tr>
<td>Feb. 23</td>
<td>3.3 Optimization</td>
<td>Apr. 22</td>
<td>Chapter 6 (&amp; section 5.6) Review</td>
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<td>Feb. 25</td>
<td>3.4 Optimization, 3.5 Opt. with Lot &amp; Harvest Size</td>
<td>Apr. 27</td>
<td>.1 Functions of Several Variables, 7.2 Partial Derivatives</td>
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<td>Mar. 2</td>
<td>3.6 Implicit Differentiation</td>
<td>Apr. 29</td>
<td>7.3 Optimizing Functions</td>
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<tr>
<td>Mar. 4</td>
<td>Chapter 3 Review</td>
<td>May 4</td>
<td>7.4 Least squares, Review for Final Exam</td>
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<td>Mar. 9</td>
<td>4.1 Exponential Functions, 4.2 Logarithmic Functions</td>
<td>May 6</td>
<td>Review for Final Exam</td>
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<td>Mar. 11</td>
<td>4.3 Differentiation of Exp and Log, 4.4 Relative Rates and Elasticity</td>
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<tr>
<td>Mar. 16-20</td>
<td>Spring Break</td>
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### 15. Exam Dates:

**Exam 1:** Ch.1 (sections 1-4) & Chapter 2 (sections 1-7): **Feb. 12, 13, 17, 18**

**Exam 2:** Ch. 3 (sections 1-6) open: **Mar. 5, 6, 9, 10**

**Exam 3:** Ch. 4 (sections 1-4) open: **Mar. 24, 25, 26, 27**

**Exam 4:** Ch. 5 (sections 1-5) open: **Apr. 7, 8, 9, 10**

**Exam 5:** Ch. 5 (section 6) & Ch. 6 (sections 1, 3, 5) open: **Apr. 23, 24, 27, 28**

### FINAL EXAM:

**4:00 p.m. class: Wednesday, May 13,** from 4:00 p.m. – 6:00 p.m. in the classroom

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Homework Assignment Format
Math 160
Spring 2009

1. Use loose leaf paper
2. On the top right hand corner of the first page, include the following:
   - Name
   - Course title
   - Section in textbook
3. Do all homework in pencil. Work done in pen will not be graded.
4. Show all work necessary to complete the problem. A correct answer with little, no, or incorrect work will receive NO credit.
5. Circle your final answer when possible.
6. Write legibly. If I cannot decipher your work, it will not be graded.
7. Do your work vertically (going down) instead of horizontally (going across).
8. Correct all odd number problems using the back of the book before turning the assignment in. You may rework the problem until you get the correct answer, if possible. Write a “C” for correct by the problem number if it is correct, or a check mark √ if it is incorrect.
9. Staple all pages for one section of homework assignment together, but do not staple more than one section together.
10. No late homework will be accepted.

How to Access Outlines for Notes & Chapter Exam Answer Keys
1. Go to http://www.csi.edu/dirdetail.asp?cdickson
2. Click to “View Personal Webpage”
3. Click on our class – Math 160 4:00 p.m.
4. Notes for each section will be posted there, and answer keys for chapter exams will be posted after each exam. Click on any that you want to open and print from there.

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