1. Discipline Name: Calculus 2 - Math 175, 4 credits.
2. Course Description: The second semester of calculus studies techniques of integration, integrals of trigonometric functions, improper integrals, Simpson’s Rule, Trapezoid Rule, Midpoint Rule, arc length, surface area, probability, parametric equations and polar calculus, some concepts of differential equations, and infinite sequences and series, Taylor’s Formula and applications.
3. Prerequisite: Math 170 with a grade of “C” or better or permission of the instructor.
5. Course Objectives: The student will demonstrate working knowledge of the material covered in Chapters 7, 8, 9.1, 9.2, 10, and 11 of the textbook. The topics are listed in the course description above, and in the topical outline below.
6. Outcomes Assessment: 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. 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.
7. Attendance: You are expected to attend all lecture sessions.
8. Homework: There will be a detailed homework discussion during each class session, as needed. Homework will be collected anytime from Monday to Friday of each week.
9. Grading: Your grade will be based on:
   
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>A 90% - 100%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>5%</td>
<td>B 80% - 89%</td>
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<tr>
<td>Tests</td>
<td>50%</td>
<td>C 70% - 79%</td>
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<tr>
<td>Semester Exam.</td>
<td>35%</td>
<td>D 60% - 69%</td>
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<td>F 0% - 59%</td>
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</tbody>
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10. Course Content:
   * Integration by Parts
   * Trigonometric Integrals
   * Trigonometric Substitution
   * Integration of Rational Functions by Partial Fractions
   * Strategy of Integration
   * Integration using Tables and Computer Algebra Systems
   * Approximate Integration
   * Improper Integrals
* Arc Length
* Area of a Surface of Revolution
* Probability
* Modeling with Differential Equations
* Direction Fields and Euler’s Method
* Curves Defined by Parametric Equations
* Calculus with Parametric Curves
* Polar Coordinates
* Areas an Lengths in Polar coordinates
* Conic Sections
* Conic Sections in Polar Coordinates
* Sequences
* Series
* The Integral Test
* The Comparison Test
* Alternating Series
* Absolute Convergence and the Ratio and Root Tests
* Strategy for Testing Series
* Power Series
* Representation of Functions as Power Series
* Taylor and Maclaurin Series
* The Binomial Series
* Applications of Taylor Polynomials

11. Class Schedule:
   Week of: January
   15 Ch. 7
   22 Ch. 7
   29 Ch. 7
   February
   5 Ch. 7. Review for test #1 (ch. 7). Test #1 (take home).
   12 Ch. 8
   19 Ch. 8. Review for test #2 (ch.8).
   26 Test #2 (ch.8). Start ch.10.
   March
   5 Ch. 10
   12 Ch. 10.
   19-23 SPRING BREAK
   26 Ch. 10. Review for test #3 (ch. 10). Test #3-t.h.
   April
   2 Ch. 11
   9 Ch.11
   16 Ch.11. Review for test #4 (11.1-119)
   23 Test #4. Ch. 11 cont.
   30 Ch. 9 (9.1 & 9.2). Final Exam. Review
   May
   7 - 10 Final Examination Week
12. Note. If you obtain less than 80% at any test, with the exception of the final exam, you may retest once for each such test. The retest will be a modified version of the original test. The tests will contain one or more extra credit exercises. The retests will contain no extra credit exercise. There will be a detailed review before each test.

The class schedule is a tentative one!

13. Graphing calculator required! Tutorial tapes are available at TES. Peer tutoring to be announced.

Website with info and tips: http://education.ti.com/collegemathnews

14. 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 class. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus. 208.732.6260 (voice), or 208.734.9929 (TTY), or e-mail: aflannery@csi.edu.

15. On-line course evaluation statement: Students are strongly encouraged to complete evaluations at the end of the course. Evaluations are very important to assist the teaching staff to continually improve the course. Evaluations are available online at: http://evaluation.csi.edu. Evaluations open up two weeks prior to the end of the course. The last day to complete an evaluation is the last day of the course. During the time the evaluations are open, students can complete the course evaluations at their convenience from any computer with Internet access. When students log in they should see the evaluations for the courses in which they are enrolled. Evaluations are anonymous. Filling out the evaluations should only take a few minutes. Your honest feedback is greatly appreciated!

16. GOOD LUCK!