Mathematics 175-C01  
Calculus II  
Course Syllabus  
4 Credit Hours

Spring 2010  
Instructor: Constance Meade  
Office Address: Shields 207-D  
Office: 12:00-12:50 MT  
Office Hours: 11:00-11:50 WF  
Office Phone: 732.6809  
Office Phone: 1.800.680.0274 x 6809 for (Idaho & northern Nevada)

Course Description:  
This course is the second course in the calculus sequence. It covers techniques of integration, improper integrals, Simpson's Rule, Trapezoid Rule, arc length, surface area, other applications of integration, direction (slope) fields, parametric equations, polar calculus, conic sections, infinite sequences and series, power series, and Taylor's formula.

Pre-requisites:  
Math 170 with a grade of "C" or better, or permission of instructor (Pre-requisites will be enforced.)

Required Textbooks and Supplies:  
- Calculus Early Transcendentals by Stewart, 6th Edition  
- A TI-83 Plus graphing calculator is required. You may also use a TI-84/ or TI-84 Plus The use of any HP, TI-89, TI-92 Plus, or Casio calculators will not be allowed in this course.  
- Pencil  
- Loose leaf paper  
- Graphing paper - http://mathbits.net/MathBits/StudentResources/GraphPaper/GraphPaper.htm

Expected Outcomes and Outcomes Assessment:  
Outcome 1: The student will master course content as presented in lecture and assigned homework.  
Assessment 1: The student will demonstrate their understanding of the material by completion of weekly assignments. Student performance will be further measured by midterm exams and a comprehensive final exam.

Outcome 2: The student will apply mathematics to real world situations.  
Assessment 2: The student will demonstrate this skill by completion of individual or group projects that require mathematical reasoning.

Outcome 3: The student will display the use of technology to enhance their understanding of mathematics.  
Assessment 3: The student will display this skill by completing an individual or group project that requires the use of a graphing calculator and/or use of the computer lab.

As part of departmental analysis of outcomes in this course and its place in the Mathematics program, student completion of the pre-requisites, 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 the department faculty to determine what, if any, changes can be made to improve the course in terms of content, focus, and instruction.
Policies and Procedures:

Attendance: Attendance may, or may not, be taken on a daily basis. However, you are expected to be in attendance each class period. If, for one reason or another, you are unable to attend, you will still be responsible for all material covered that day.

Hours of lecture each week: 10:00 – 10:50 Monday, Wednesday, & Friday in Shields 204
11:00 – 11:50 Tuesday in Shields 108

Homework: Homework will be assigned. It is expected to be completed at the beginning of the following class meeting, unless otherwise stated. This homework will be collected and graded on a random basis. You may be notified at the beginning or at the end of class on the day that it is collected. No late homework will be accepted. The average of your homework assignments will count as one test score.

Solutions to the scored homework problems will be available electronically via my personal web page for at least 24 hours after the homework set has been returned to the students in class. It is your responsibility to retrieve these.

Exams: At least four regular exams will be given during the semester. There will be no make-up or re-take exams given. If you must miss one, that grade will be replaced by your score on the final exam. These may be taken in the classroom.

Take-home Exam: Sometime during the 2nd or 3rd week of class you will be given a take-home exam. This exam will take you most of the semester to complete.

Final Exam: The final exam will be comprehensive. This exam will be given on Monday, May 10, 2010 From 10:00 AM - 12:00 PM in Shields 204. This will count as one exam score.

Note: To earn a grade of a "C" or higher in this course, each student must earn a score of a 60% or higher on the final exam.

Grading: Your percentage will be calculated as follows: Your Total Percentage Points = %
Total Percentage Points Possible

Although I reserve the right to revise this scale downward, 90% of the possible points, or above, will always be and 'A', 80%-89% a 'B', etc.

Coverage: Chapter 7, Section 8.1, 8.2, (8.3-8.5 if time permits), Section 9.1, 9.2 (9.3-9.4 if time permits), Chapters 10 & 11, but not necessarily in that order.

Cheating: See page 34 of the current CSI catalogue. A violation of the policy will be dealt with severely, including but not limited to, being dismissed from the class and/or given a grade of "F" for the course.

Use of the Instructor's solution manual to complete assigned homework sets is considered to be cheating and qualifies as a violation of the CSI policy on honesty.

Cellular Telephones/Palm Pilots/Lap Tops: These are expected to be turned off during class time.

General Classroom Behavior: See pages 34-36 of the current CSI catalogue. As a student, you are
expected to maintain appropriate conduct during the 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 of acceptable conduct may 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 I can conference with any students who are involved.

Aids for the Course:

- **Study Groups** - If you need assistance forming a study group, I will gladly make assignments based upon your schedules. Being an active member of a study group is extremely important to your success in this class.

- **Student Solutions Manual** - all odd numbered problems are worked "briefly" in this document. However, "briefly" accurately describes these solutions. Most of the time, this will not suffice as a detailed solution for your homework problems. I will be looking for the "key" missing information.

- **Instructor** - I have office hours scheduled on a daily basis. If you need to meet with me and cannot do so during those scheduled times, please feel free to schedule another time that is convenient for you.

- **Graphmatica** - This is a free computer software program that is extremely user friendly.

- **Maple** - This is a computer software program that is loaded onto the computers in the Math Lab and the computers in Shields 211. I may be instructing you on its use during classroom lectures.

- **Math Lab** - The Math lab will be open the first week of the semester. However, the hours will be limited to 8:30 - 12:30 for the first week.

Topical Outline:

I. Techniques of Integration
   - Integration by Parts
   - Trigonometric Integrals
   - Trigonometric Substitution
   - Partial Fraction Decomposition
   - Strategies for Integration
   - Integration Using Tables and Computer Algebra Systems
   - Approximate Integration
   - Improper Integrals – Trapezoidal & Simpson’s Rule

II. Applications of Integration
   - Arc Length
   - Area of a Surface of Revolution
   - Applications to Physics/Engineering/Economics/Biology
   - Probability

III. Differential Equations
   - Modeling with Differential Equations
   - Direction Fields and Euler’s Method

IV. Parametric Equations and Polar Coordinates
   - Curves defined by Parametric Equations
   - Calculus with Parametric Curves
   - Polar Coordinates
   - Areas and Lengths in Polar Coordinates
   - Conic Sections
V. Infinite Sequences and Series

- Sequences
- Series
- The Integral Test and Estimate of Sums
- The Comparison Tests
- Alternating Series
- Absolute Convergence and the Ratio and Root Tests
- Strategies for Testing Series
- Power Series
- Representations of Functions as Power Series
- Taylor and Maclaurin Series
- The Binomial Series
- Applications of Taylor Polynomials

Course Evaluation:
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](http://evaluation.csi.edu). Evaluations open up to 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, including the open lab in the Library and in the SUB. When students log in they should see the evaluations for the courses in which they are enrolled. Evaluations are anonymous. Filling out the evaluation should only take a few minutes. Your honest feedback is greatly appreciated.

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 as soon as possible. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus: 208.732.6260 (voice) or 208.734.9299 (TDD), or 800.680.0274 (Idaho & Nevada). Please refer to the 2009-2010 College of Southern Idaho Catalog under "Student Disability Services", on page 38.

E-Mail:
Because 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: <address>@eaglemail.csi.edu where <address> is a name selected by the student as a part of activating his/her account. Students activate their accounts and check their CSI e-mail online at [http://eaglemail.csi.edu](http://eaglemail.csi.edu). Instructors and various offices send messages to these student 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.
Homework Assignment Format
Mathematics 175

1. Use loose leaf paper.

2. Write on the front side of the page only.

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 insufficient, no, or incorrect work will receive no credit.

5. Circle your answer when possible.

6. Write legibly. If I cannot decipher your work, it will Not be graded.

7. No late homework will be accepted.

I will be grading your homework. I will be checking for completion, “technique”, and accuracy. By this I mean that I will be checking for correct notation and procedure. Directions for this will be provided in class during lecture time or during question/answer time.

To submit:
Fold entire document in half, lengthwise.

On the outside of the document, write
- Your name
- Course title
- Chapter and Section number of assignment

Example
Jane Doe
Math 175-C01
Section 7.3
# Study Group Information

Name: ____________________________

Contact Information:
- Telephone: ______________________
- e-mail: ________________________

## Days and Times available for Study Group

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Return to Professor Meade as soon as possible if you are interested in forming a study group.