Course #: Math 1312, CRN 23673
Course Title: Calculus II
Credit Hrs: 3.0
Term: Spring 2010
Course Meetings: MW 4:30PM – 5:50PM
Location: LART 106
Prerequisite Courses: Math 1411 with “C” or better
Instructor: Francisco Avila
Personal Webpage: http://www.math.utep.edu/Faculty/favila/
Office Location: Classroom Building 404C
Contact Info: 747-8908 Phone #
favila2@utep.edu E-mail address
747-6502 Fax #
747-5761 Emergency Contact (Math Department)
Office Hrs: M 1:30–2:30, W 3:30-4:30, TR 4:00-5:30, or by appointment
Textbook(s), Materials:
Suggested: TI-83 or TI-84 Calculator
Course Objectives (Learning Outcomes):
1. Use integration to: find the area between curves; find volumes of solids of revolution; find total work done, moment, center of mass and fluid force in appropriate problems; find the average value of a function.
2. Evaluate appropriate integrals by using trigonometric identities, integration by parts, and/or trigonometric substitution.
3. Evaluate integrals of rational functions by the method of partial fractions.
4. Recognize improper integrals, determine whether they converge, and if possible, evaluate them.
5. Given a sequence, determine whether or not it converges, and if it does, find the limit.
6. Determine the convergence of a series by appropriate tests, including the ratio, comparison, p-series, and alternating series tests.
7. Find the interval of convergence for a power series.
8. Apply Taylor’s Theorem to find polynomial approximations to given functions and estimate their accuracy.
Course Activities/Assignments:
There will be homework assignments and group work in a regular basis and there will be several quizzes. **I do not collect textbook homework problems but I strongly encourage you to do all the proposed problems.** You will have 15-20 minutes to solve each quiz. You cannot use your notes or book during a quiz. Makeup quizzes will be given only in extraordinary circumstances, which must be documented as early as possible.
Assessment of Course Objectives:

- **Exams.** Three exams will be given. The dates of the exams will be announced in class (Exam’s dates on the schedule may change). There are no make-ups.

- **Quizzes and Group Work (Homework).** At least one quiz or group work assignment will be given each week. There are no make-ups.

- **Final Exam.** The comprehensive final exam will be given on **Monday, May 10th, 4:00PM – 6:45PM.**

Grading Policy:

**Grade Calculations:** Your grade will be calculated in two ways. The higher of the two will determine your course grade:

Grade 1 = 60% (Exams) + 10% (Take-Home Quizzes) + 10% (Quizzes) + 20% (Final)

Grade 2 = 70% (Final Exam) + 15% (Take-Home Quiz) + 15% (Quizzes)

Make-up Policy: Make-up quizzes will be given only in extraordinary circumstances, which must be documented as early as possible. No late homework accepted. **There is no makeup final exam** and anybody who misses the test will automatically receive an F in the class.

Attendance Policy: As with every college course, attendance is essential for success. Try not to be absent unless it is absolutely necessary.

Academic Integrity Policy: It is the official policy of the university that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. For further information, please refer to: [http://academics.utep.edu/Default.aspx?tabid=23785](http://academics.utep.edu/Default.aspx?tabid=23785) or [http://www.lib.iastate.edu/commons/resources/facultyguides/plagiarism/dishonest.html](http://www.lib.iastate.edu/commons/resources/facultyguides/plagiarism/dishonest.html).

Civility Statement: It is the student’s responsibility to attend every class, if you miss a class, you will miss a lot of information. If you try to go from one class to another without studying, you will most likely be completely lost during the next class. Students are expected to arrive for class on time and to remain for the class entire period. It is essential to pay attention in class and take legible notes. It is important to read the textbook and work through the example problems given in the book and class. A graphing calculator is required. Calculators may not be shared during quizzes and exams. Please do not use cell phones, pagers, IPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Please do not wear headsets or blue tooth devices during class. Cell phone calculators may not be used on quizzes or exams. Failure to accomplish the above, as a minimum almost invariably ensures a less than satisfactory grade for this course.
Disability Statement: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148 or at <dss@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.

Military Statement: If you are a military student with the potential of being called to military service and/or training during the semester, please contact me by the end of the first week of class (January 22nd).

Course Schedule:

1/19 – 1/22
Section 8.1: Basic Integration Rules
Section 8.2: Integration by parts

1/25 – 1/29
Section 8.3: Trigonometric Integrals
Section 8.4: Trigonometric Substitutions

2/1 – 2/5
Section 8.5: Partial Fractions
Section 8.6: Integration by tables and Other Integration Techniques

Census Day – Wednesday, February 3rd

2/8 – 2/12
Section 8.7: Indeterminate Forms and L’Hopital’s Rule
Section 8.8: Improper Integrals
Review (If time allows)

2/15 – 2/19
Section 7.1: Area of a Region Between Two Curves
Exam #1 – Wednesday

2/22 – 2/26
Section 7.2: Volume: The Disk Method
Section 7.3: Volume: The Shell Method

3/1 – 3/5
Section 7.4: Arc Length and Surfaces of Revolution
Section 7.5: Work

3/8 – 3/12
Section 7.6: Moments, Center of Mass, and Centroids
Section 7.7: Fluid Pressure and Fluid Force
Review (If time allows)

3/15 – 3/19
Spring Break (No classes)

3/22 – 3/26
Section 9.1: Sequences
Exam #2 – Wednesday

3/29 – 4/2
Section 9.2: Series and Convergence
Section 9.3: Integral Test and p-Series
Drop Deadline – Friday, April 2nd

4/5 – 4/9
Section 9.4: Comparisons of Series
Section 9.5: Alternating Series
4/12 – 4/16   Section 9.6: The Ratio Test and Root Test
              Section 9.7: Taylor Polynomials and Approximations

4/19 – 4/23   Section 9.8: Power Series
              Section 9.9: Representation of Functions by Power Series

4/26 – 4/30   Section 9.9: Representation of Functions by Power Series
              **Exam #3 – Monday**

5/3 – 5/7     Section 9.10: Taylor and Maclaurin Series
              Review (If time allows)
              **No classes – Friday, May 7th**