

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE

DEPARTMENT OF Mathematical Sciences

Course #: Math 1312
Course Title: Calculus II
Credit Hrs: 3.0
Term: Fall 2009
Course Meetings & Location: TR 9:00am-10:20am LART 209
Prerequisite Courses: C or better in Math 1411
Course Fee: (if applicable) N/A
Instructor: Maria Pia Beccar Varela
Office Location: Bell Hall 216
Contact Info: Phone # 915-747-8038
E-mail address: mpvarela@utep.edu
Fax # 915-747-6502 (Math Department)
Emergency Contact: 915-747-5761 (Math Department)

Office Hrs: Monday 2:30-4:00pm - Wednesday 2:30-4:00pm.
Textbook(s), Required: **Calculus, UTEP/EPCC Edition**, by
Materials: Larson, Hostetler, Edwards.
Strongly recommended: TI-83 or TI-84 Calculator

Course Objectives (Learning Outcomes):

1. Use integration to find the area between curves, volumes, center of mass, and average value of a function among other applications.
2. Evaluate integrals by using integration by parts, trigonometric substitutions, or change of variable.
3. Evaluate rational functions' integrals by the method of partial fractions
4. Recognize improper integrals, their convergence and whenever it is possible, evaluate them.
5. Sequences: convergence of sequences and limits.
6. Series: determine the ratio of convergence, study convergence by using comparison, p-series and alternating series tests.
7. Interval of convergence for power series, apply Taylor's theorem to find polynomial approximations for functions.

Contents: Chapter 7 - Applications of Integration
Chapter 8 - Integration Techniques, L'Hopital's rule, and Improper Integrals
Chapter 9 - Infinite Series

Course Activities/Assignment s: I will assign group homework, and quizzes (in class) that will be based in the textbook homework problems. I will not collect textbook hw problems, but you should solve them, in order to have a good performance in the group homework, and quizzes.

Assessment of Course **Exams:** Two exams will be given. The dates of the
Objectives: exams are below in Course schedule. There are no
make-ups.

Quizzes and Group hw: One quiz or group hw will be
given each week. There are no make-ups.

Final Exam: The comprehensive final exam will be
given on 12/8 10:00 am 12:45 pm

Course Schedule: Course Schedule:

8/24 - 8/28 Section 7.1: Area of a Region Between Two Curves

Section 7.2: Volume: The Disk Method

8/31 - 9/4 Section 7.3: Volume: The Shell Method

Section 7.4: Arc Length and Surfaces of Revolution

9/7 - 9/11 Section 7.5: Work

Section 7.6: Moments, Center of Mass, and Centroids

Section 7.7: Fluid Pressure and Fluid Force

9/14 - 9/18 review

Exam #1 -- Thursday

9/21 - 9/25 Section 8.1: Basic Integration Rules

Section 8.2: Integration by parts

9/28 - 10/2 Section 8.3: Trigonometric Integrals

Section 8.4: Trigonometric Substitutions

10/5 - 10/9 Section 8.5: Partial Fractions

Section 8.6: Integration by tables and Other

Integration

Techniques

10/12 - 10/16 Section 8.7: Indeterminate Forms and L'Hopital's Rule.

Section 8.8: Improper Integrals

Section 9.1: Sequences

10/19 - 10/23 Section 9.1: Sequences and review

Exam #2 -- Thursday

10/26 - 10/30 Section 9.2: Series and Convergence

Section 9.3: Integral Test and p-Series

Drop Deadline - Friday, October 30

11/2 - 11/6 Section 9.4: Comparisons of Series

Section 9.5: Alternating Series

Section 9.6: The Ratio Test and Root Test

11/9 - 11/13 Section 9.6: The Ratio Test and Root Test

Section 9.7: Taylor Polynomials and Approximations

11/16 - 11/20 Section 9.8: Power Series

Section 9.9: Representation of Functions by Power Series

11/23 - 11/27 Section 9.10: Taylor and Maclaurin Series

11/30-12/3 review

Grading Policy: **Quizzes, homework and class participation 25%**
Two in class exams 20% each
Final exam: 35%

The usual standard grading scale will be used (90-100% = A, 80-89% = B, 70- 79% = C, etc.).

Make-up Policy: Make-up exams and 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.**

Attendance Policy: 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 essential to read the textbook and work through the example problems given in the book and class. Failure to accomplish the above, as a minimum almost invariably, ensures a less than satisfactory grade for this course.

Academic Integrity Policy: The University policy is 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>
or
<http://www.lib.iastate.edu/commons/resources/facultyguides/plagiarism/dishonest.html> .

Civility Statement: 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. Please don't talk in class. Cell phone calculators may not be used on quizzes or exams. Active participation in class is expected, teamwork in class will be implemented.

Disability Statement: If a student has or suspects she/he 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