**THE UNIVERSITY OF TEXAS AT EL PASO**
**COLLEGE OF SCIENCE**
DEPARTMENT OF Mathematical Sciences

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| Course #: | Math 1312 |
| Course Title: | Calculus II |
| Credit Hrs: | 3.0 |
| Term: | Fall 2009 |
| Course Meetings & Location: | TR 1:30pm–2:50pm<br>LART 202 |
| 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<br>E-mail address: mpvarela@utep.edu<br>Fax # 915-747-6502 (Math Department)<br>Emergency Contact: 915-747-5761 (Math Department) |
| Office Hrs: | Monday 2:30-4:00pm – Wednesday 2:30-4:00pm. |
| Textbook(s), Materials: | Required: **Calculus, UTEP/EPCC Edition**, by Larson, Hostetler, Edwards.<br>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.<br>2. Evaluate integrals by using integration by parts, trigonometric substitutions, or change of variable.<br>3. Evaluate rational functions' integrals by the method of partial fractions<br>4. Recognize improper integrals, their convergence and whenever it is possible, evaluate them.<br>5. Sequences: convergence of sequences and limits.<br>6. Series: determine the ratio of convergence, study convergence by using comparison, p-series and alternating series tests.<br>7. Interval of convergence for power series, apply Taylor's theorem to find polynomial approximations for functions.<br><br>**Contents:** Chapter 7 – Applications of Integration<br>Chapter 8 – Integration Techniques, L'Hopital's rule, and Improper Integrals<br>Chapter 9 – Infinite Series |
| Course Activities/Assignments: | 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. |

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| Assessment of Course Objectives: | **Exams:** Two exams will be given. The dates of the exams are below in Course schedule. There are no make-ups.<br>**Quizzes and Group hw:** One quiz or group hw will be given each week. There are no make-ups.<br>**Final Exam:** The comprehensive final exam will be given on 12/10 from 4:00pm to 6:45 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

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