

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: Spring 2015
Course Meetings & Location: TR 9:00am-10:20am
Prerequisite Courses: C or better in Math 1411
Course Fee: (if applicable) N/A
Instructor: Dr. Maria Pia Beccar Varela
Office Location: Bell Hall 216
Contact Info: Phone # 915-797-8038
E-mail address: mpvarela@utep.edu
Fax # 915-747-6502 (Math Department)
Emergency Contact: 915-747-5761 (Math Department)
Office Hrs: Monday 3:00-4:30pm - Thursday 4:00-5:30pm., but stop by anytime you need.
Textbook(s), Materials: Required: **Calculus, Last Edition**, by 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/Assignments: I will assign homework, and quizzes (in class) that will be based in the textbook homework problems.

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.

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

Final Exam: The comprehensive final exam will be given on Tuesday, May 12, 10:00am -12:45 pm
[http://academics.utep.edu/Portals/382/Scheduling/201520/SPRING%202015%20\(2\).pdf](http://academics.utep.edu/Portals/382/Scheduling/201520/SPRING%202015%20(2).pdf)

Course Schedule: **Tentative schedule:**

1/20 - 1/23 Section 7.1: Area of a Region Between Two Curves. Section 7.2: Volume: The Disk Method

1/26 - 1/30 Section 7.3: Volume: The Shell Method
Section 7.4: Arc Length and Surfaces of Revolution

2/2 - 2/6 Section 7.5: Work. Section 7.6: Moments, Center of Mass, and Centroids
Section 7.7: Fluid Pressure and Fluid Force

2/9 - 2/13 Review. **Exam #1 -- Thursday**

2/16 - 2/20 Section 8.1: Basic Integration Rules
Section 8.2: Integration by parts

2/23 - 2/27 Section 8.3: Trigonometric Integrals
Section 8.4: Trigonometric Substitutions

3/2 - 3/6 Section 8.5: Partial Fractions. Section 8.6: Integration by tables and Other Integration Techniques

3/9 - 3/13 Spring Break

3/16 - 3/20 Section 8.7: Indeterminate Forms and L'Hopital's Rule. Section 8.8: Improper Integrals
Section 9.1: Sequences

3/23 - 3/27
Section 9.1: Review. **Exam #2 -- Thursday**

3/30 - 4/3 Section 9.2: Series and Convergence
Section 9.3: Integral Test and p-Series

Drop Deadline - Monday, April 6

4/6 - 4/10 Section 9.4: Comparisons of Series
Section 9.5: Alternating Series
Section 9.6: The Ratio Test and Root Test

4/13 - 4/17 Section 9.6: The Ratio Test and Root Test
Section 9.7: Taylor Polynomials and Approximations

4/20 - 4/24 Section 9.8: Power Series
Section 9.9: Representation of Functions by Power Series

4/27 - 5/1 Section 9.10: Taylor and Maclaurin Series

5/4-5/8 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.

Each student is responsible for notice of and compliance with the provisions of the Regents' [Rules and Regulations](#), which are available for inspection electronically at <http://www.utsystem.edu/bor/rules/homepage.htm>.

All students are expected and required to obey the law, to comply with the Regents' [Rules and Regulations](#), with System and University rules, with directives issued by an administrative official in the course of his or her authorized duties, and to observe standards of conduct appropriate for the University. A student who enrolls at the University is charged with the obligation to conduct himself/herself in a manner compatible with the University's function as an educational institution.

Any student who engages in conduct that is prohibited by Regents' [Rules and Regulations](#), U. T. System or University rules, specific instructions issued by an administrative official or by federal, state, or local laws is subject to discipline, whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

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 you have a disability and need classroom accommodations, please contact: The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.**

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