

**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 2020  
Course Meetings & Location: TR 6:00-7:20pm  
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 3:30-5:00pm and - Thursday 4:20-5:50pm but stop by anytime you need.

Textbook(s), Required: **Calculus II, UTEP Edition**, by  
Materials: Larson.  
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 I will assign homework, and quizzes (in class) and  
Activities/Assignments that will be based in the textbook homework  
s: problems.

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 hw:** One quiz or hw will be given each  
week. There are no make-ups.  
**Final Exam:** The comprehensive final exam is  
scheduled on Thursday, May 14 7:00 pm– 9:45 pm

There is not make-up final exam.

**The Drop Date for this semester is Friday April 3, 2020.**

Course Schedule: **Tentative Schedule:**

1/21 - 1/24 Section 7.1: Area of a Region Between Two Curves

Section 7.2: Volume: The Disk Method

1/27 - 1/31 Section 7.3: Volume: The Shell Method

Section 7.4: Arc Length and Surfaces of Revolution

2/3 - 2/7 Section 7.5: Work

Section 7.6: Moments, Center of Mass, and Centroids

Section 7.7: Fluid Pressure and Fluid Force

2/10 - 2/14 review

**Exam #1 -- Thursday**

2/17 - 2/21 Section 8.1: Basic Integration Rules

Section 8.2: Integration by parts

2/24 - 2/28 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 Section 8.7: Indeterminate Forms and L'Hopital's Rule.

Section 8.8: Improper Integrals

Section 9.1: Sequences

3/16 - 3/20 Spring break - no classes

3/23 - 3/27

Section 9.1: Sequences and review

**Exam #2 -- Thursday**

3/30 - 4/3 Section 9.2: Series and Convergence

Section 9.3: Integral Test and p-Series

**Drop Deadline - Friday, April 3**

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 a student has or suspects she/he has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support services (CASS) at 747-5148 or at <cass@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS 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