

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

Course #: Math 2313 CRN: 19167  
Course Title: Calculus III  
Credit Hrs: 3.0  
Term: Fall 2016  
Course Meetings & TR 4:30-5:50pm  
Location: Liberal Arts Building 202  
Prerequisite Courses: C or better in Math 1312  
Course Fee: (if N/A  
applicable)  
Instructor: Jaime P. Lepe  
Office Location: Library Room #523  
Contact Info: Phone # TBA  
E-mail address: jplepe@utep.edu  
Fax # 915-747-6502 (Math Department)  
Emergency Contact: 915-747-5761 (Math  
Department)  
Office Hrs: Monday's 12:00 - 3:00pm but stop by anytime you  
need.

Textbook(s), Required: **Calculus III, UTEP Version (latest**  
Materials: **edition) or full version, by Larson.**

Suggested: Marsden and Tromba,  
*Vector Calculus*, W. H. Freeman

Strongly TI-83 or TI-84 Calculator  
recommended:

Course Objectives **Contents:** Continuation of MATH 1312. Topics include  
(Learning Outcomes): solid analytic geometry, partial differentiation,  
and multiple integration. We will cover chapters 11  
through 14 in detail.

If time permits: Perform a cursory inspection of  
the integral theorem's (Green, Gauss and Stokes) of  
vector analysis.

Course Homework is assigned and completed using Webassign.  
Activities/Assignment Students are expected to read the textbook prior to  
s: each class meeting and be familiar with the current  
topic of discussion outlined in the course  
schedule. It is expected that you spend an absolute  
minimum of six hours a week outside of class doing  
homework, reading the textbook and reviewing your  
class notes.

Assessment of Course Objectives: **Exams:** Two exams will be given. There are no make-up exams

**Homework and in-class work:** Homework is assigned and completed using Webassign. In class work/activities will also be given. They will be based on the material coming from homework problems and the examples discussed in the textbook/lecture.

**Final Exam:** The comprehensive final exam is scheduled on Tuesday 12/6 4:00pm - 6:45pm.

<http://academics.utep.edu/Portals/382/docs/Final%20Examination%20Schedule%20Fall%202016.pdf>

There is not a make-up final exam.

**The Drop Date for this semester is Friday October 28, 2016.**

Grading Policy: **Homework: 100 points.**  
**In-class activities: 50 points.**  
**Two in class exams: 100 points each.**  
**Final exam: 150 points.**

The course grade will be determined by taking the total points earned dividing by the total possible number of points (500) a student can earn, rounding to the nearest unit, and assigning a letter grade based on the usual grading scale: (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.**

Academic Integrity Policy: See UTEP's policy cited in <http://academics.utep.edu/Default.aspx?tabid=23785>

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

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.

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.

Course Schedule: Chapters 11--14 in the text will be covered in detail, as well as topics from Chapter 15 as time permits.

#### **Tentative schedule**

8/22 - 8/26

Section 11.1: Vectors in the plane.

Section 11.2: Space coordinates.

8/29 - 9/2

Section 11.3 The dot product.

Section 11.4: The cross product.

Section 11.5: Lines and planes in space.

9/5 - 9/9

Section 11.6: Surfaces in space.

Section 11.7: cylindrical and spherical coordinates.

Review.

9/12 - 9/16

#### **Exam #1 -- Tuesday**

Section 12.1: Vector valued functions

9/19 - 9/23

Section 12.2: Differentiation and integration of vector valued functions.

Section 12.3: Velocity and acceleration

9/26 - 9/30

Section 12.4: Tangent vectors and normal vectors

Section 12.5: Arc lengths and curvatures

10/3 - 10/7

Section 13.1: Functions of several variables.

Section 13.2: Limits and continuity

10/10 - 10/14

Section 13.3: Partial derivatives.

Section 13.4: Differentials

Section 13.5: Chain rule for functions of several variables

10/17 - 10/21

Section 13.6: Directional derivatives and gradients

Section 13.7: Tangent planes and normal lines.

Review.

10/24 - 10/28

**Exam #2 - Tuesday**

Section 13.8: Extrema of functions of two variables.

**Drop Deadline - Friday, October 28**

10/31 - 11/4

Section 13.9: Applications

14.1: Iterated integrals and area

11/7 - 11/11

Section 14.2: Double integrals and volume

Section 14.3: Change of variables and polar coordinates

11/14 - 11/18

Section 14.5: Surface area

Section 14.6: Triple integrals and applications

11/21 - 11/25

Section 14.7 Triple integrals in cylindrical and spherical coordinates.

Section 4.8 change of variables and jacobians.

11/28 - 12/2

Chapter 15

Review

**Dead Day (No Classes) - Friday, December 2**

12/5 - 12/9

**Final Exam - Tuesday 12/6 4:00pm - 6:45pm**