

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

- Course #:** 25743
Course Title: Calculus III (Math 2313)
Credit Hrs: 3
Term: Spring 2014
Course Meetings & Location: MW, 4:30-5:50 PM
LART 209
Prerequisite Courses: Calculus I and II. In particular, students should be familiar with the quadratic equation, the elementary functions such as exponential and logarithmic functions, trigonometric and hyperbolic functions, as well as their inverses, their derivatives and their integrals, and the techniques of integration.
- Course Fee: (if applicable)**
- Instructor:** Dr. B. D. Rouhani
Office Location: Bell Hall 327
Contact Info: Phone # 747-6767
E-mail address: behzad@utep.edu
Fax # 747-6502
Emergency Contact
- Office Hrs:** MW, 3:00-4:00 PM, and by appointment.
- Textbook(s), Materials:** Required: Larson, Hostetler, and Edwards, Calculus, 9th Edition, Houghton Mifflin Company; Boston, N. Y.
The textbook is required at all class meetings, and is intended to be read in full.
Graphing calculator with capabilities equivalent at least to the TI-85.
Topics from chapters 11-14 will be covered.
Suggested: (for more advanced and motivated students) Tom M. Apostol, Mathematical Analysis: A modern approach to Advanced Calculus, Addison-Wesley Longman Inc., 1974.
- Course Objectives (Learning Outcomes):** The course continues Calculus I and II where students have learned about the differential and integral calculus of real valued functions of one variable. The main objectives of Calculus III include teaching the students the differential and integral calculus of vector valued functions of one variable, as well as the differential and integral calculus of functions of several variables, and their applications to physical problems of science and engineering. By the end of the course, the students should be well prepared to take more advanced courses in Math, as well as be able to apply their knowledge to solve practical problems they encounter in physical sciences and engineering.

Course The class is a student run class. Therefore besides the core lecture, as well as the computer demonstrations, the instructor will regularly ask questions to students who are expected and strongly encouraged to actively participate in the group discussions that will follow.

Activities/Assignments: The instructor will regularly assign homework. It is essential for your success in this class that you diligently work all the homework problems. Homework will include reading assignments, as well as group projects. Homework for each section is due the next class after we finish that section. Late homework is not accepted.

It is expected that you spend an absolute minimum of six hours a week outside of class on solving homework problems, working on the lab assignments, reading the textbook and reviewing your class notes.

List of Homework problems:

Section Number	Problem Numbers
11.1	4, 8, 14, 18, 24, 28, 30, 36, 38, 44, 50, 70
11.2	4, 8, 12, 14, 22, 28, 32, 36, 39, 40, 44, 48, 68, 76, 84
11.3	8, 10, 18, 22, 26, 28, 32, 46, 48, 50
11.4	6, 10, 16, 30, 32, 36, 44, 46, 49, 65
11.5	8, 10, 14, 22, 24, 28, 40, 46, 58, 62, 70, 86, 92, 100, 106
11.6	1-6, 24, 54
11.7	4, 8, 18, 26, 30, 38, 44, 50, 58, 68
12.1	6, 8, 14, 16, 20, 21, 32, 50, 68, 71, 74, 78
12.2	20, 22, 28, 30, 42, 44, 46, 60, 66, 72
12.3	10, 18, 20, 26, 28
12.4	10, 16, 22, 28, 30, 32, 36
12.5	4, 6, 10, 14, 22, 30, 50
13.1	6, 12, 20, 27, 39, 52
13.2	4, 8, 16, 20, 28, 30, 38, 44, 58, 84
13.3	8, 16, 28, 50, 63, 68, 78, 84
13.4	6, 7, 10, 12, 16, 20
13.5	2, 4, 6, 8, 13, 15, 18, 20, 23, 27, 32, 39
13.6	2, 8, 16, 19, 20, 24, 25, 28, 31, 37
13.7	1, 2, 7, 14, 22, 28, 32, 36, 42, 50
13.8	5, 6, 8, 16, 22, 23, 27, 32, 37, 46
13.9	2, 3, 5, 8, 11
13.10	4, 6, 10, 12, 18, 35, 39
14.1	2, 6, 12, 19, 20, 27, 28, 33, 34, 40, 46, 58, 70, 72
14.2	7, 8, 13, 14, 20, 21, 53, 54
14.3	9, 16, 20, 26, 30, 33, 44, 46
14.4	3, 5, 11, 22
14.5	2, 14, 15, 33
14.6	2, 8, 13, 21, 23, 27

Assessment of Course Objectives:

Besides the group class discussions and the homework assignments that were mentioned above, quizzes will regularly be given in class on almost every section that will be covered in class, and will count towards your final grade as explained below in the grading policy.

Although the group class discussions do not affect directly your final grade, however, actively participating in them will be considered when deciding about the final grades for the students on the border line (i.e. between C or D).

In addition, there will be a final comprehensive exam for this course.

Course Schedule: We will cover the following material according to the following tentative (subject to change) timeline:

Week of	Sections covered	Events
January 20	11.1, 11.2	No class on 1/20, Martin Luther King, Jr. Birthday
January 27	11.3, 11.4	
February 3	11.5, 11.6	Wednesday 2/5 is the last day to drop without "W".
February 10	11.7, and review	
February 17	12.1, 12.2	
February 24	12.3, 12.4	
March 3	12.5, and review	
March 10		No class from March 10-14, Spring Break
March 17	13.1, 13.2	
March 24	13.3, 13.4	
March 31	13.5, 13.6	Monday, 3/31 is the Cesar Chavez Day Observance, No classes. Friday, 4/4 is the last day to drop with an automatic "W".
April 7	13.7, 13.8	
April 14	13.9, 13.10, and review	Friday, April 18 is the Spring Study Day, No classes.
April 21	14.1, 14.2	
April 28	14.3, 14.4	
May 5	14.5, 14.6, and review	No class on 5/9 (Dead Day)
May 12	Finals week	Comprehensive Final exam is on Monday, May 12, at 4:00 PM, in LART 209

(NOTE: Final exams must be given at the scheduled time; any/all exceptions must be approved by both the department chair and the dean.)

Notes: 1) The instructor will NOT assign a "W" for students dropping the course after the deadline.

2) Help: There is plenty of help available to you provided you are willing to take advantage of it. The Tutoring and Learning Center, located on the third floor of the UTEP Library, tel. 747-5366, offers free tutoring. Also, besides my office hours I will gladly meet with you on a drop in basis any time I am free to do so. Talk to me before or after class or by phone or by [email](#) to set up an appointment.

Grading Policy: The usual grading scale will be used for this course (90 or above corresponds to an A, 80 to 89 is a B, 70 to 79 is a C, 60 to 69 is a D, below 60 is an F).

The final grade G will be calculated according to the following formula:

$$G = \text{Max}\{(0.9) Q + (0.1) H, F\}$$

Where Q is the average grade of all quizzes, H is the homework grade, and F is the final exam's grade.

Make-up Policy: Make-up tests or quizzes will only be given under extraordinary circumstances and only if you notify the instructor prior to the exam date.

Attendance Policy:

- Attendance to all classes is required; late arrivals are not allowed; more than three consecutive absences without prior notice or justification will result in the student's drop from the class list with an "F".

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

Civility Statement: Active participation and teamwork is strongly encouraged; use of cell phone and talking during class, which results in the disruption of other students, are not allowed.

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.**

Military Statement: If you are a military student with the potential of being called to military service and /or training during the course of the semester, you are encouraged to contact me as soon as possible.

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- **[General remark:](#)**

[If you have problems with the course material, need to be absent for a test, or have any other circumstance that may affect your performance in the course, contact me as soon as possible. I will do everything I can to enable you to succeed in this course and I expect you to be as diligent in your efforts as I am in mine.](#)

[If you have any question, please send it to Dr. B.D. Rouhani via e-mail at \[behzad@utep.edu\]\(mailto:behzad@utep.edu\)](#)