

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE

DEPARTMENT OF Mathematical Sciences

Course #: Math 2301
Course Title: Math for Social Sciences II
Credit Hrs: 3.0
Term: Summer I 2015
Course Meetings & Location: MTWRF 2:00pm-4:10pm
Prerequisite Courses: An adequate score on a placement examination, or Math 1320 or Math 1508 or TCCN Math 1314.
Course Fee: (if applicable) N/A
Instructor: Dr. Maria Pia Beccar Varela
Office Location: Bell Hall 216
Contact Info: Phone # 915-747-8038
E-mail address: mpvarela@utep.edu
Fax # 915-747-6502 (Math Department)
Emergency Contact: 915-747-5761 (Math Department)
Office Hrs: Monday 4:15-5:15pm - Thursday 4:15-5:15pm., but stop by anytime you need.
Textbook(s), Required: **Mathematics for Social Sciences II, UTEP last**
Materials: **edition, by Stefan Waner, Steven R. Constenoble.**

. Strongly encouraged: TI-83 or TI-84 Calculator

Course Objectives (Learning Outcomes):
1. Use matrix algebra for different applications.
2. Learn the meaning and applications of the derivative.
3. Learn how to apply several Techniques of Differentiation
4. Learn the meaning and applications of the integral.

Chapter 4 - Matrix Algebra and Applications
Chapter 10 - Introduction to the Derivative
Chapter 11 - Techniques of Differentiation
Chapter 12 - Applications of the Derivative
Chapter 13 - The Integral

Course I will assign homework, and quizzes (in class)
Activities/Assignments: that will be based in the textbook homework problems. I will not collect all the textbook hw problems, but you should solve them, in order to have a good performance in the group homework, and quizzes.

Assessment of Course **Exams:** Two midterm exams will be given. There are
Objectives: no make-ups.
Quizzes and hw: Quizzed and hw will be given each
week. There are no make-ups.
Final Exam: There is a comprehensive final exam.

Course Schedule: Tentative Course Schedule:

6/8 - 6/12

Chapter #4, Section 4.1 Matrix Addition and Scalar Multiplication, Ex 1, Matrix Addition and Subtraction. Scalar Multiplication. Section 4.2 Matrix Multiplication, the Product row x Column. Section 4.2 The product of two matrices General Case. Identify Matrix. Properties of transposition. Section 4.3 Matrix Inversion, Example 1. Finding the inverse of a Matrix. Inverting and $n \times n$ Matrix. Using the inverse to solve a system of n Linear Equations in n Unknowns. Example 4. Chapter #10, Section 10.1 Limits: Numerical and Graphical Approaches. Ex 1. Definition of a Limit. Example 5. Section 10.2 Limits and Continuity.

6/15 - 6/19

Section 10.3 Limits and Continuity: Algebraic Approach. Theorem: Continuity of Closed-Form Functions. Limits at Infinite. Theorem: Evaluating the Limit of a Rational Function. Section 10.4 Average Rate of Change of a Function Using Numerical Data. Using Graphical Data. Examples. Review.

Exam #1 on Thursday, 6/18

Chapter 11, Section 11.1 The Product and Quotient Rules. Calculation Through Experiment, Applications, Ex 4.

6/22 - 6/24

Section 11.2 The Chain Rule. Chain Rule in Differential Notation, Example 5. Section 11.3 Derivatives of Logarithmic and Exponential Functions. Examples. Section 11.4 Implicit Differentiation, Examples. Chapter 12 Section 12.1 Maximum and Minima. Examples. Section 12.2 Application of Maxima and Minima. Section 12.3 The second Derivative. Differential Notation. Concavity. Section 12.4 Related Rates.

Exam #2 on Friday, 6/26

Drop Deadline - Friday, June 26

6/29 - 7/1

Chapter 13, Section 13.1. The Integral. Review.

Final Exam: Thursday, July 2, 2:00-4:10pm

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.

The Drop Date is Friday June 26, 2015.

Final Exam: Thursday, July 2, 2:00-4:10pm

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 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

Suggested homework assignments below do not need to be handed in, and you will be expected to complete it by the next class period.

If a special Homework is assigned, you need to turn it in, the due date for this homework will be determined by the instructor.

Chapter 3

HW #1: Read Section 3.1, do 1, 3, 9, 11, 15, 17, 19, 25, 27, 37, 39, 41, 43, 45, 47

HW #2: Read Section 3.2, do 1, 5, 9, 13, 17, 23, 25, 29, 33, 45, 47, 49, 51, 53, 55, 57, 65

HW #3: Read Section 3.3, do 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 43, 45, 47, 49, 51, 53, 55

Chapter 10

HW #4: Read Section 10.1, do 3, 5, 7, 9, 13, 15, 19, 21, 23, 25, 29.

HW #5: Read Section 10.2, do 1-13 (odd), 15, 17, 23, 31.

HW #6: Read Section 10.3, do 3, 5, 7, 9, 13, 17, 19, 21, 27, 29, 31, 33, 35, 37, 41, 43, 45, 47.

HW #7: Read Section 10.4, do 1, 3, 5, 7, 9, 11, 13, 15, 17, 25, 27, 31, 33.

Chapter 11

HW #8: Read Section 11.1, do 13-41 (odd), 57-75 (odd).

HW #9: Read Section 11.2, do 1-35 (odd), 45-65 (odd), 83-93 (odd).

HW #10: Read Section 11.3, do 1-35 (odd), 45-65 (odd), 83-93 (odd).

HW #11: Read section 11.4, do: 1-7 (odd), 11-21 (odd), 31, 33, 35, 53, 55.

Chapter 12

HW #12: Read section 12.1, do: 1-35 (odd).

HW #13: Read section 12.2, do: 1-23 (odd), 27-35 (odd), 39.

HW #14: Read section 12.3, do: 1-15 (odd), 23-37 (odd), 59-65.

HW #15: Read section 12.4, do: 1-7 (odd), 23, 29-33.

Chapter 13

HW #16: Read section 13.1, do: 1-59 (odd).