Course Syllabus for ECON 5305
CRN 27571
Mathematics for Economists

INSTRUCTOR: Lorenzo Blanco
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OFFICE HOURS: MW 21:00 – 21:30, MWTR 10:00 – 11:00.

TEXTBOOK: Simon, Carl P. and Lawrence Blume (1994), Mathematics for Economists, W.W. Norton & Co., New York, NY. This textbook is optional; lectures will also be based on other sources.

COURSE OBJECTIVES: Students will learn many of the mathematical tools necessary for core courses in economics programs at the graduate level.

GRADERS. Your final grade is determined as follows:

- Problem Sets. There will be four problem sets, altogether worth 10% of the final grade (in other words, each one of them is worth 2.5% of the final grade).
- Midterms. There will be two midterms. Each midterm exam is worth 25% of the final grade.
- Final Exam. The final exam will be worth 40% of the final grade.

All problem sets are due IN CLASS. No late assignments accepted.

Midterm exams will be IN CLASS. All examinations, including the final exam, will be CLOSED BOOK exams. There will be no make-up exams for individuals. If for any reason you miss and exam the next exam’s grade will substitute the grade for the missed exam. You must take the Final Exam in order to pass this course.

If you suffer from a disability that requires accommodations contact the Disabled Students Services Office at 747-5148, go to the Union Bldg. (East), Room 106, or email dss@utep.edu.

REGRADING POLICY. Please follow these simple rules if you wish to dispute a grade on your midterm exam. Please follow these instructions verbatim:

1). Do not speak to the instructor or teaching assistant about your Regrade Request. No grading disputes will be handled orally. You may not come to office hours to discuss grading concerns. This will only be done in writing. Any attempt to get around this rule invalidates your Regrade Request.
2). Put it in writing. Please indicate the page number and question number of the answer you wish to address. Please be brief and to the point and explain why you do not understand the grade you received. Regrade Requests exceeding one sheet of paper (8.5 x 11in.) will not be accepted.

3). You have one week to submit your Regrade Request. No Regrade Requests will be accepted one week after grade exams are returned. You must submit your Regrade Request to the instructor or teaching assistant before or after class or in the mailboxes in the Dept. of Economics & Finance.

4). Do not write on your graded exam. Put all of your concerns in your Regrade Request. Put all modified answers on a SEPARATE sheet of paper. Do not alter your graded exam in any way. This will invalidate your Regrade Request.

5). You may not dispute the grade on your FINAL EXAM.

FINAL EXAM: Please verify this information in the Spring 2005 Schedule of Classes. The final exam will be held on Monday, May 4th from 7:00pm to 9:00pm.

Grades will be available online at Goldmine by May 16th, 2005.

Scholastic Integrity
The University of Texas at El Paso prides itself on its standards of academic excellence. In all matters of intellectual pursuit, UTEP faculty and students must strive to achieve excellence based on the quality of work produced by the individual. In the classroom and in all other academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP. It is imperative, therefore, that the members of this academic community understand the regulations pertaining to academic integrity and that all faculty insist on adherence to these standards.

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. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP), and available in the Office of the Dean of Students, and the homepage of The Dean of Students (DOS) at www.utep.edu may result in sanctions ranging from disciplinary probation, to failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.

Census Day is January 26th. Classes dropped by this day are deleted from record.

Course Drop Deadline with an automatic “W” is March 18th.
COURSE OUTLINE

1. One Variable Differential Calculus
   a. Differential Calculus = Slope-finding
   b. Rules of one variable calculus
   c. Applications of one variable calculus
   d. The Chain Rule
   e. Exponents and Logarithms (the magical letter e) (Problem Set #1)

2. Multivariate Differential Calculus
   a. Economic and Geometric Interpretation
   b. The Total Derivative
   c. The Chain Rule
   d. Directional Derivatives and Gradients
   e. Higher Order Derivatives
   f. Implicit Functions and Their Derivatives

3. Optimization
   a. Lagrange Optimization
   b. First and Second Order Conditions
   c. Economic Applications (Problem Set #2).

Midterm #1, February 9th, 18:00 – 19:20

4. One Variable Integral Calculus
   a. Integral Calculus = Area Finding
   b. Rules for One Variable Integral Calculus
   c. Applications (Problem Set #3)

5. More rules for One Variable Integral Calculus
   a. Integrations by Parts
   b. Rules named after snoopy European people.

6. Multivariate Integral Calculus
   a. Interpretation
   b. Double and Triple Integrals (Problem Set #4)

Midterm #2, April 6th, 18:00 – 19:20

7. Linear Algebra
   a. Systems of Linear Equations
   b. Matrix Algebra
   c. Determinants
   d. Euclidean Spaces
8. Stuff you never wanted to learn
   a. Mathematical Operators
   b. Taylor Polynomials
   c. Series (Problem Set #5).

Final Exam, May 4th from 19:00 – 21:00

Problem Set #5 will be a Bonus Problem Set equal to five points on your final grade.

If you have any questions about this syllabus please contact me via email or phone. This syllabus is not a legal contract.