

Syllabus  
Math Tools for Economists II  
ECON 1088-002

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Instructor: Sihong Xie

Class Meeting: Monday, Wednesday & Friday 11:00AM – 11:50AM, MUEN E417

Office Location: Economics Building Room 307

Office Hours: Mon/Wed 9:40AM - 10:40AM and by appointment

Class Website: Desire2Learn (D2L)

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COURSE DESCRIPTION & OBJECTIVES

This course is the second of two courses designed to give you the mathematical background necessary for future courses in business and economics. It is a continuation of ECON 1078 which builds upon the basic foundation developed in that course. Topics to be covered in this course include differentiation, optimization, integration and their applications in economics. These are Chapters 6,7,8,9, and 11 in the textbook. T

Calculators will NOT be allowed during exams!!!

I want you to understand what you are doing and calculators are a major impediment to understanding, so you don't need a calculator in this course. I will make sure that any actual calculations you need to perform on the tests will be straight forward, so using a calculator is unnecessary.

### NOTES

I do not distribute my lecture notes. I will ask you do small practice problems along with

There will be **no makeup** exams. If a family emergency or health emergency arises, contact me right after you come back to class. Then schedule a meeting with me and bring a documented medical or family emergency notification. Missed exam will be given no weight in the calculation of the final grade and other exams will be reweighted accordingly.

If you have three or more final exams (including mine) scheduled for the same day, you can reschedule my final exam if you would like. If so, you are required to let me know by Monday, March 6th, 2017.

If you are a student athlete, and your game schedules conflicts with exam schedule, please inform me in a written note before Monday, March 6th, 2017, so I can arrange your exam proctored by an athletic administrator.

### CHEATING

Cheating is NOT tolerated in this class. "When in doubt, accuse!" is the mantra for this department, so clear yourself from all suspicious behavior. If I have strong suspicions of dishonest behavior, first, I am obligated to impose an academic sanction that includes failure in the course even for a single instance. Second, I am obligated to report all incidents of academic misconduct to the Honor Code Office. Cheating results in severe setback for you and considerable administration time for me, so my best advice to you is DON'T CHEAT!

### GRADE ADJUSTMENT

You will be responsible for monitoring your own grades. All communication about grades is through D2L or in person, not through email! I will post grades for all graded work in timely manner. If you have questions about grades, you should come to talk to me immediately. I will not

not be graded but I will give you feedback in the class as a group. These activities provide chance for you to learn from each other and demonstrate what you have learnt from the class and serve as attendance counts at the same time.

Homework:

You will not fully grasp the material unless you practice on a regular basis. Your text book provides excellent questions with answers in the back of the book. To facilitate the process, I will create four homework assignments for you to practice. Your exam questions will be very similar to these homework questions.

The due date for each assignment will be given at the time it is handed out. I will grade each problem set on

### *Religious Observance Policy*

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. If you have a conflict, please contact me at the beginning of the term so we can make proper arrangements.

For more information on the religious holidays most commonly observed by CU Boulder students consult the online interfaith calendar, <http://www.interfaithcalendar.org/>.

### *Classroom Behavior Policy*

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty has the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions.

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_cod](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_cod).

### *Honor Code*

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying

## Tentative Course Schedule

| Date        | Course Material | Topics                                                               |
|-------------|-----------------|----------------------------------------------------------------------|
| 1/17 - 1/20 | 6.1, 6.2        | Slopes of curves, Derivatives                                        |
| 1/23 - 1/27 | 6.3, 6.4, 6.5   | Increasing and Decreasing Functions, Rates of Changes, Limits        |
| 1/30 - 2/3  | 6.6, 6.7, 6.8   | rules for differentiation, Chain Rule,                               |
| 2/6 - 2/10  | 6.9, 6.10, 6.11 | High order derivatives, Exponential functions, Logarithmic functions |
| 2/13 - 2/17 | Review, Exam1   | Exam 1 on February 17                                                |
| 2/20 - 2/24 | 7.1, 7.2, 7.7   | Implicit Differentiation, Economic examples, Elasticities            |
| 2/27 - 3/3  | 7.8, 11.1, 11.2 | Continuity, Functions of two variables, Partial derivatives          |
| 3/6 - 3/10  | 11.6, 11.7      | Partial derivatives, Applications                                    |
| 3/13 - 3/17 | 11.8, 12.3      |                                                                      |