

Syllabus  
Math Tools for Economists II  
ECON1088-001  
2016 Fall

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Instructor: Sihong Xie

Class Meeting: Tuesday & Thursday 2:00PM - 3:15PM, ECON 117

Office Location: Economics Building Room 307

Office Hours: Tue 3:15PM - 4:30PM, Thu 11:15AM - 12:15PM and by appointment

Class Website: Desire2Learn (D2L)

Email Address: [sihong.xie@colorado.edu](mailto:sihong.xie@colorado.edu)

This is the best way to contact me outside of my office hours.  
Please allow me 24 hours to respond.

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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. These tools will help you better understand the mathematical framework on which economics models are built and help you to prepare for more advanced courses in economics.

EXPECTATIONS

You can expect me to:

- o be prepared for the day's work and do my best to assist you in your course work .
- o treat everyone equally, be professional and respectful at all times
- o be available in my office hours, ask thoughtful questions, and give my

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 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 lectures during class so it is a good idea to bring a spiral note book and pens to work with me in class. If you must miss lecture for any reason, please be sure to obtain the notes from a classmate and come to my office to discuss any of the material from lecture.

### OFFICE HOURS

Office hours are established to help you succeed. You should use them as a resource to get extra help on lecture material, problem sets, express concerns or difficulties in your study, and to explore ideas you are interested in. Coming to office hours is a good indication that you care about your studies enough to take extra steps.

As a way to better know you, I ask each of you to individually meet me in my office for 10-15 minutes during the first three weeks. I will bring a sign-up sheet during the first week so you can arrange a meeting with me. As an extra incentive for you to come to this meeting, I give you 1 extra point toward your final grade.

### EMAIL

I encourage you to email me with any questions or concerns. Please be polite and considerate in all email communications. I will do my best to respond within 24 hours. This response may come in the form of an email directly back to you or,



Midterm Exam 2	20%
Final Exam	30%

All exams are closed book exams. All you need to bring to exams are pencils

<u>Attendance</u>	Attendance will be taken in the form of minute paper. These papers will not be graded and handed back to you. They provide a low pressure environment for you to demonstrate what you have learnt from the class and serve as attendance counts at the same time.
<u>Homework</u>	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. <u>Your exam questions will be very similar to these homework questions.</u>  The due date for each assignment will be given at the time it is handed out. I will grade each problem set on a scale of 0-10. For each assignment, I will randomly choose two questions to grade in detail. 6 points are for completeness of an assignment, 4 points are for correctness on selected questions. <u>Answers to homework questions will be posted on D2L after a homework is collected.</u>
<u>Midterm Exam 1 &amp; 2:</u>	Two midterm exams will take place during the regularly scheduled class time.
<u>Final Exam</u>	The final exam will take place on Wednesday, December 14, 2016 from 1:30PM to 4:00PM (2.5 hours). Fifty percent (50%) of the questions will be material covered in lectures and class materials <u>before</u> the midterm exam 2, and fifty percent (50%) of questions will be material covered in lectures and class materials <u>after</u> the midterm exam 2.

Grades will be determined as follows: A (90-100), B (80-89), C (70-79), D (60-69), F (50-59), I (40-49), W (0-39)

## ADDITIONAL INFORMATION

### Students with Disabilities

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Center for Community N200, and <http://www.colorado.edu/disabilityservices>.

If you have a temporary medical condition or injury, see guidelines at <http://www.colorado.edu/disabilityservices/go.cgi?select=temporary.html>. Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to Frequently Asked Questions can be found at <http://www.colorado.edu/disabilityservices>.

### 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

limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at [honorcode.colorado.edu](http://honorcode.colorado.edu) or <http://www.colorado.edu/policies/honor.html>.

#### Discrimination & Harassment Policy

The University of Colorado at Boulder Discrimination and Harassment Policy and Procedures, the University of Colorado Sexual Harassment Policy and Procedures, and the University of Colorado Conflict of Interest in Cases of Amorous Relationships Policy apply to all students, staff, and faculty. Any student, staff, or faculty member who believes s/he has been the subject of sexual harassment or discrimination or harassment based upon race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127, or the Office of Student Conduct (OSC) at 303-492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.

### Tentative Course Schedule

Date	Course Material	Topics
8/22 - 8/26	6.1, 6.2	Slopes of curves, Derivatives
8/29 - 9/2	6.3, 6.4, 6.5	Increasing and Decreasing Functions, Rates of Change, Limits
9/5 - 9/9	6.6, 6.7, 6.8	rules for differentiation, Chain Rule,
9/12 - 9/16	6.9, 6.10, 6.11	High order derivatives, Exponential functions, Logarithmic functions
9/19 - 9/23	Review, Exam 1	Exam 1 on September 22
9/26 - 9/30	7.1, 7.2, 7.7	Implicit Differentiation, Economic examples, Elasticities
10/3 - 10/7	7.8, 11.1, 11.2	Continuity, Functions of two variables, Partial derivatives
10/10 - 10/14	11.6, 11.7	Partial derivatives, Applications