Syllabus
Math Tools for Economists II
ECON 1088-002
2016 Spring

Instructor: Sihong Xie
Class Meeting: MWF 3:00PM – 3:50PM, ECON 117
Office Location: Economics Building Room 307
Office Hours: Mon/Wed 1:30pm- 2:50pm and by appointment
Class Website: Desire2Learn (D2L)
Email Address: sihong.xie@colorado.edu
> *This is the best way to contact me outside of my office hours.*
> *Please allow me 24 hours to respond.*

COURSE DESCRIPTON & 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 derivatives, optimization, and integrals. 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 you equally, be professional and respectful at all times.
- o   be available in my office hours, ask thoughtful questions and give my full attention.

You are expected to:
- o   regularly attend class, arrive and leave on time, and silence your phone.
- o   complete all assignments and turn in work on time.
- o   be respectful to others and cooperate with your cohorts.
- o   ask questions and take co-responsibility for creating a meaningful class.

REQUIRED TEXT

Essential Mathematics for Economic Analysis, ISBN 1323259236 for Sydsaeter + Smarthinking package. If you have the fourth edition of this text book from ECON 1078, you can continue to use it. Having a math book around in life is a wise thing to do, so I suggest buying one rather than renting it, especially if you will continue to learn economics, you may want to read all chapters in this book even those chapters we do not cover in ECON 1078 and ECON 1088.

CALCULATORS

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 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 study enough to take extra steps.

As a way to better to 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.

EMAIL

I encourage you to email me with any questions and 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, if the answer would be beneficial to the entire class, a mass email communication to the class or an announcement during the lecture. Grades will not be discussed over email.

ATTENDANCE

Attendance is required for this course, and you will not do well in this course unless you attend every class. I will be taking attendance **randomly** six times throughout the semester. You are allowed to have three absences without consequence. For each additional absence (4 or more) a third of 10 points will be deducted from your final grade in the course. Individuals that are present all six times get a 3 bonus points on their final grade in the course.

HOMEWORK/PRACTICE PROBLEMS

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 for you to practice. Your exam questions will be very similar to these homework questions.

ASSESSMENT and GRADING

Evaluations will take the following forms:

Attendance	10%
Homework	20%
Midterm Exam 1	20%
Midterm Exam 2	20%
Final Exam	30%

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

I reserve the rights to curve the grades for any individual exam or course overall.

Attendance:	Attendance will be taken in the format of minute paper. These papers will not be graded. They serve as attendance counts. There are no makeups for missing minute papers. If you miss a minute paper, it will be accounted as one absence and will be dropped.
Homework:	I will create four homework. You will be able to use your lecture notes, your text, and your classmates to help you work out the problems. The due date for each assignment will be given at the time it is handed out and no assignments will be accepted late. I will grade each problem set on a scale of 0-10. For each assignment, I will choose two questions to grade in detail. 6 points are for completeness of an assignment, 4 points are for correctness on selected questions. Answers will be posted on D2L.
Midterm Exam 1 &2:	The first midterm exam will take place on **Friday, February 12, 2016** during the regularly scheduled class time. The Second midterm exam will take place on **Monday, March 14, 2016** during the regularly scheduled class time. There will be no makeup exam given. If you must miss an exam, the weight of the missed midterm will be added to your final exam. You must notify me of your exam absence before the midterm date in order to avoid a zero.
Final Exam:	The final exam will take place on **Wednesday, May 4, 2016** from 7:30PM to 10:00PM (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. There will be **no makeup exam given**. 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, February 22nd, 2016.**

	If you are a student athlete, and your game schedules conflicts with exam schedule, please inform me in a written note before **Monday, February 22nd, 2016,** so I can arrange your exam proctored by an athletic administrator.

Grades will be determined as follows:

Your Score	Grade	Your Score	Grade
94.00 – 100	A	73.00 – 76.99	C
90.00 – 93.99	A-	70.00 – 72.99	C-
87.00 – 89.99	B+	67.00 – 69.99	D+
83.00 – 86.99	B	63.00 – 66.99	D
80.00 – 82.99	B-	60.00 – 62.99	D-
77.00 – 79.99	C+	59.99 and below	F

<u>ADDITIONAL INFORMATION</u>

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.

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

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, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273).

Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at 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
1/11-1/15	6.1, 6.2	Slopes of curves, Derivatives
1/18-1/22	MLK Day, 6.3, 6.4	Increasing and decreasing Functions, Rates of Changes
1/25-1/29	6.5, 6.6, 6.7	Limits, rules for differentiation
2/1-2/5	6.8, 6.9, 6.10	Chain Rule, High order derivatives, Exponential functions
2/8-2/12	6.11, Review, **Exam1**	Logarithmic functions
2/15-2/19	7.1, 7.2, 7.7	Implicit Differentiation, Economic examples, Elasticities
2/22-2/26	7.8, 11.1, 11.2	Continuity, Functions of two variables, Partial derivatives
2/29-3/4	11.6, 11.7	Partial derivatives, Applications
3/7-3/11	11.8, Review	Partial elasticities
3/14-3/18	**Exam2**, 12.3	Implicit differentiation along level curve
3/21-3/25	Spring Break!	
3/28-4/1	8.1, 8.2	Introduce optimization, extreme points
4/4 - 4/8	8.3, 8.6, 8.7	Economic examples, Local extreme points, Inflection points
4/11-4/15	9.1, 9.2, 9.3	Indefinite integrals, Definite integrals, Properties
4/18-4/22	9.4, 9.5, 9.6	Economic applications, Integration by parts, by substitution
4/25-4/29	Catch up and Review	
Final Exam, Wednesday, May 4, 2016 7:30 pm – 10:00 pm		