

# ECON 1088-001

## Math Tools for Economists II

M, W, F 3:00-3:50 PM , ECON 119

**Instructor:** NA KYEONG LEE

**Email:** na.lee@colorado.edu

**Website:** The desire2learn page will have grades throughout the semester

**Office Hours:** W : 3:50-4:50, F: 3:50-4:50 at Econ 309C

### **Textbook:**

Essential Mathematics for Economic Analysis, Fourth Edition, Knut Sydster, Peter Hammond, Arne Strm

Lectures will follow the textbook chapters. The third edition of the book is similar, but I will assign homework from the most recent edition and it will be your responsibility to make sure you are doing assigned homework.

### **Course Description:**

This course is the second of a two-course sequence, and continuation of ECON1078. We will study 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 based and help prepare you for more advanced economics.

### **Prerequisite(s):**

ECON 1078 or its equivalent

### **Class Attendance:**

You are responsible for all materials covered in class lectures. Attendance at all lectures is strongly recommended. Missed quizzes and exams **cannot** be made-up for any reason.

### **Laptops/Tablets:**

**There is to be no laptop, tablet, or phone use for this case at any time , for any reason.** The only exception to this rule is if disability services mandate that you must be allowed to use a laptop for note taking purposes. In this case, an official letter from disability service is required.

### **Homeworks:**

Homework Assignments will be assigned regularly throughout the semester. These assignments will not be graded, but quiz questions will be very similar to those on the homework.

### **Quizzes:**

Quizzes will be given through the semester. Some will be announced ahead of time, some will not. I will drop your lowest quiz grade.

**Exams:**

Three exams are scheduled on the days listed below during regular class time. **Therefore, no early exams, no late exams, and no make-up exams will be given.**

**Final Exam:**

If you have 3 or more finals scheduled on the same day, you may reschedule all exams after the first. **You must notify me by Feb 15th in order to reschedule the final exam.**

**Exam Dates and Times:**

- Midterm 1:
- Midterm 2: Mar 18th WED
- Midterm 3: Apr 22nd WED
- Final Exam: May 4th. 7:30-10:00 PM

**Gradings:**

Your grade for this course will be based on three midterms, quizzes and a final exam. **There will be no extra-credit available.** I cannot email you about your grades due to university and federal policy laws; you must come into office hours to discuss them. I will not email you back if you email me questions about your grade.

**Grade Distribution:**

Quizzes	15%
Midterm 1	20%
Midterm 2	20%
Midterm 3	20%
Final Exam	25%
Total	100%

**Letter Grade Distribution:**

>= 93.00	A	73.00 - 76.99	C
90.00 - 92.99	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	F

**Additional Notes**

Student 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://disabilityservices.colorado.edu/quick-links/temporary-injuries>

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/dissabillityservices>

#### Religious Observance Policy

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, **you must notify me within the first 3 weeks of class if you will need to miss a midterm or final exam.** See full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

#### Classroom Behavior Policy

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity, and gender expression, age, disability, 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\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code).

#### Discrimination and 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>.

#### 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](mailto:honor@colorado.edu); 303-735-2273). 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 <http://honorcode.colorado.edu/>

#### **Tentative Course Outline:**

The weekly coverage might change as it depends on the progress of the class.

Week	Content
Jan 12	6.1-6.3 Syllabus, Pre-Tests Slopes, Derivatives, Tangents, Increasing/Decreasing Functions
Jan 19	Martin Luther King, Jr. Day
Jan 21	6.4-6.6 Rates of Change, Limits
Jan 26	6.7-6.8 Sums, Products, Chain Rule
Feb 2	6.9-6.11 Higher Order, Exponentials, Logarithms
Feb 9	Review
Feb 16	7.1, 7.2, 7.7 Implicit Differentiation, Elasticities.
Feb 23	7.8-7.9 Continuity
Mar 2	8.1-8.3 Optimization
Mar 9	8.6, 8.7 Local Extrema, Inflection Points
Mar 16	Review
Mar 23	Spring Break
Mar 30	11.1-11.3 and 12.3 Functions of Many variables, Partial Derivatives. Geometry
Apr 6	11.5, 11.6 Many Variables
Apr 13	9.1-9.3 Indefinite Integral, Definite Integral and its Properties
Apr 20	Review
Apr 27	9.5, 9.6 Integration