

ECON 1078-003 : Mathematical Tools for Economists 1

Fall 2020

Syllabus

Instructor Colin Jareb

Course Meetings Monday, Wednesday, Friday at 1:50 PM in Muenzinger E432

Office Hours Tuesday 1:00 PM-3:00 PM and Wednesday 11:00 AM-12:00 PM

Office Economics 306

Zoom <https://cuboulder.zoom.us/my/cjareb>

Contact colin.jareb@colorado.edu

Course Info

Description This course is the first of a two-course sequence designed to introduce a variety of mathematical concepts which will be used extensively in future economics coursework. In order to achieve mastery of the material, a variety of topics will be introduced followed by extensive practice. Topics that will be covered include but are not limited to college algebra, solving systems of equations, set theory, logic, functions, and differentiation.

Prerequisites There are no prerequisites for this course.

Textbook

Essential Mathematics for Economic Analysis, 5th Edition, by Sydsaeter, Hammond, and Strom, Pearson Publishing, ISBN 9781292074610. You are allowed to use an older edition of the text if desired.

Structure

On the following weeks the midterms and final exam will be held, dates and times will be determined later:

- Midterm 1: September 23
- Midterm 2: October 21
- Midterm 3: November 18
- Final: Thursday, December 10 1:30-4:00 PM

The course consists of lectures, homework, class participation, and exams.

Lecture I will post recorded lectures prior to each week of classes. I highly encourage but do not require you to watch the recorded lectures. I will occasionally utilize resources such as quiz questions and polls to gauge

the level of participation but will not be counting this towards your grade in any way.

Homework Every other week during the semester, I will post homework assignments on Canvas for you to complete. The homework will consist of practice problems designed to re-enforce material covered in the relevant lectures and in-class problem sets. Homework assignments will generally be due on Fridays at 11:00 PM. Late submissions and make-ups will not be allowed. I will drop the lowest homework grade at the end of the semester. There are three options you may use to submit homework; in-person (during class), through email, or through Canvas. If submitting through email or Canvas please scan a copy of the worked out problem set that is clear and legible and submit a pdf file. If you do not have access to a scanner I recommend downloading Adobe Scan or Genius Scan to your smartphone. If you do not have access to a smartphone, a scanner, and cannot submit homework in-person please let me know.

Class Participation Each week during the semester, I will post a practice problem set on Canvas. During our in-person classes I will allow you to work on these problem sets, clarify any issues from the posted lectures, and ask questions. By attending class in-person or through Zoom you will receive credit for these problem sets, even if you don't finish them. If you are unable to attend class in-person or through Zoom, to receive credit you must submit a completed practice problem set by Friday at 11:00 PM through the same procedure as submitting homework. I will allow you to work in groups on these problem sets and submit them as a group if you desire. Furthermore, each week I will start a discussion post on Canvas. The purpose of the discussion thread is for you to ask your classmates for help on the practice problem sets. Over the course of the semester, to receive full credit for the discussion posts you must ask at least two questions and respond to at least two of your classmates' questions.

Exams Exam dates are listed above. Midterms will be held during the weeks of 9/23, 10/21, and 11/18. The final will be held on December 10 at 1:30 PM. Midterms will consist of free-response questions which are non-cumulative to the extent that material builds on itself. The final will consist of free-response questions which are cumulative. You must take the final exam in this course; failure to do so will result in a failing grade. The topics that each exam encompasses will be announced in class prior to the exam. University policy allows students who have more than three finals to reschedule the last final of the day. If students wish to reschedule a final, they must inform me by November 1.

Grading

Your grade will be determined by the following components and weights:

- In-class Problem Sets: 16%
- Discussion Posts: 4%
- Homework: 20%
- Highest Midterm: 20%
- 2nd Highest Midterm: 10%
- Lowest Midterm: 0%
- Final Exam: 30%

I will assign letter grades with a +/- . I will follow economics department guidelines which means the average grade will be curved to a B-. The size of this curve will not be known until after all components of the course have been graded.

Course Policies

Missed Assignments In the case that an extreme illness is experienced leading to missing homework and/or problem set I will shift the weight of these to subsequent homeworks and/or problem sets. In the case that a midterm exam is missed then this midterm will be considered as your lowest midterm and will not be counted against you. Proper documentation will be required for all missed assignments. **A time-stamped note from Wardenburg does not qualify as an extreme illness.**

Communication Outside of in-person classes, office hours, and Zoom, the optimal way to contact me is through email. I will not respond to emails if the answer to your question is in the syllabus. Please use your Colorado.edu account to email me, and include in the subject line ECON 1078. Please allow 24 hours for a response during the week, and 48 hours on weekends. I will occasionally distribute information through official university email; thus, it is expected that you will maintain and monitor your university email address.

Exam Policy Exams are the only components used to determine grades for which collaboration is explicitly prohibited. If you are caught cheating you will receive a 0 on the associated assignment. An online proctoring service will be utilized while exams are taken. I do not know what data the online proctor collects nor how securely this data is stored; by enrolling in this class you acknowledge that I am not liable for this and that you will be agreeing to the terms of service dictated by the online proctor.

Intellectual Property All course materials are the property of the instructor and may not be shared with any individual outside of the course at any time for any reason without permission in writing from the instructor. Course materials, including but not limited to lecture presentation slides, assignments, grading rubrics, exams, discussion posts, and recitation activities, may not be posted to any website (e.g., Course Hero or similar sites, social media, etc.). The same applies to any audio or video recordings of lecture or recitation. A violation of this policy will be treated as a violation of the academic integrity policy.

Electronics Cell phone use is not permitted during class. If there is an emergency requiring the use of a cell phone please step outside the classroom. The use of tablets and laptops for educational purposes (ie lecture slides, Canvas, Mindtap) is permitted; however, I reserve the right to disallow their use if electronics are not being used appropriately.

University Policies

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>.

COVID-19: As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements, and public health orders in place to reduce the risk of spreading infectious disease. Required safety measures at CU Boulder relevant to the classroom setting include:

- maintain 6-foot distancing when possible,
- wear a face covering in public indoor spaces and outdoors while on campus consistent with state and county health orders,
- clean local work area,
- practice hand hygiene,
- follow public health orders, and

- if sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional), or if you live on-campus, please alert CU Boulder Medical Services.

Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policies on COVID-19 Health and Safety and classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the Accommodation for Disabilities statement on this syllabus.

Before returning to campus, all students must complete the COVID-19 Student Health and Expectations Course. Before coming on to campus each day, all students are required to complete a Daily Health Form.

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home and complete the Health Questionnaire and Illness Reporting Form remotely.

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. If you have a conflict, please contact me at the beginning of the term so that we can make proper arrangements.

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, veterans status, sexual orientation, gender, gender identity, and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the students 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.

Discrimination and Harrasment Policy: The University of Colorado at Boulder Discrimination and Harrasment 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; 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 nonacademic sanctions (including but not limited to university probation, suspension, or expulsion).