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ECNS 301.01: Intermediate Microeconomics with Calculus

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UNIVERSITY OF MONTANA
Economics 301: Intermediate Microeconomics with Calculus

Course Information:

Semester: Fall 2021
Section: Section 01
Meeting time: MWF 12:00-12:50
Classroom: LA 338
Credits: 3 credits
CRN: 70037

Instructor Information:

Instructor: Douglas Dalenberg
Office: LA 413
Email: doug.dalenberg@mso.umt.edu
Phone: 406-243-4406 (message only; email will get a faster response.)
Office hours: MF 1:00-1:50, W 3:00-4:00 or by appointment.

Teaching Assistant:

TA: Patrick Boise
Office: LA 407 / 408A
Email: patrick.boise@umconnect.umt.edu
Office hours: MW 2:00-4:00, R 12:00-2:00 or by appointment.

Course Description:

This course is designed to give you a solid grounding in microeconomic theory. We will review, refine and expand upon the methods of analysis you learned in Principles of Microeconomics. The focus of this class is economic models and theory. The course is roughly divided into three sections: the derivation of demand, the derivation of supply, and using supply and demand to gain insights into markets.

Prerequisites:

ECNS 201S: Principles of Microeconomics and Calculus (M 162 or M 171).

Required Text:

None.

Optional Text:

There is no required textbook since there are plenty of resources available on the internet. If you do want a text, I have several suggestions: Pindyck, Robert and Rubinfeld, Daniel, *Microeconomics*, Prentice Hall; Varian, Hal R., *Intermediate Microeconomics with Calculus*, W.W. Norton & Company; Goolsbee, Austan, Levitt, Steven, and Syverson, Chad, *Microeconomics*, Worth Publishers; Nechyba, Thomas, *Microeconomics: An Intuitive Approach with Calculus*, Cengage. You can often get an older edition much cheaper. Talk to me if you want to know about the different books.

Course Supplement:

The course Moodle page will contain the assorted course documents.

Learning Outcomes:

Students who successfully complete ECNS 301 will be able to:

1. Apply more advanced mathematical techniques to the basic principles of microeconomics.
2. Use budget constraints and indifference curves to analyze consumer behavior and incentives.
3. Derive individual and market demand curves based on consumer choice theory.
4. Understand how firms use revenue and cost information to make production decisions in competitive markets.
5. Analyze the production decisions of monopolies, oligopolies and monopolistic competitors.
6. Understand the economic effects of government intervention in markets.

Assessment:

| Assignment | Weight | Date (Subject to change) |
|-------------------------------|--------|--|
| Individual Meeting Assignment | 4% | Flexible. |
| 9 Homework | 36% | 9/10,9/17,9/29,10/13,10/27,11/8,11/15,12/3,12/10 |
| 5 Quizzes | 50% | 9/22, 10/4, 10/18, 11/1, 11/19. |
| In-class Final Exam | 10% | Friday, December 17 8:00-10:00. |

I will use plus/minus grading with 100-92=A, 91-90=A-, 89-88=B+, 87-82=B, 81-80=B-, 79-78=C+, 77-72=C, 71-70=C- 69-68=D+, 67-62=D, 61-60=D-, 59 and below=F.

Policies:

Health

1. I will be following the University Covid-19 recommendations for classrooms. Currently they require a mask in class and labs and recommend masks indoors. The mask policy can be found on the [Student Affairs](http://www.umt.edu/student-affairs/community-standards/) website (<http://www.umt.edu/student-affairs/community-standards/>). Please make sure your mask covers your mouth and nose and is worn properly.
2. If my office hours conflict with your schedule, contact me for an appointment (in-person or Zoom). I will require masks in my office. If that does not work for you, we will meet over Zoom or outside.
3. Although attendance is not part of your course grade, attending class is important for your learning. I will be taking attendance and making a seating chart to assist with contact tracing but it is not a direct component of your grade.
4. Let's keep our classroom a healthy environment. Do not come to class if you are sick. If you feel sick and/or are exhibiting COVID-19 symptoms, please don't come to class and contact the Curry Health Center at (406) 243-4330. If you are a close contact with someone who tests positive, we will follow University policies. If I must miss class, I will notify you via email.
5. If you are required to isolate or quarantine, I will work with you to be sure you have access to the recordings and handouts and I will meet with you over Zoom for questions you have.
6. UM (and I) recommend you get the COVID-19 vaccine. Please direct your questions or concerns about vaccines to Curry Health Center.

Classroom

1. In order to keep us safe, please no food or drinks in the classroom.
2. I will be recording the classes and posting the recordings on Moodle. The recordings are not a perfect substitute for attending class and there are some things such as class activities that the

recording will miss but they can be a good resource.

3. If you miss a quiz and you contact me prior to or immediately after the quiz, we will make arrangements for dealing with the missing score (usually a make-up quiz). If I am not contacted promptly, then no make-up quiz is possible.
4. Late homework is penalized with a deduction of points reflecting the cost it imposes on me or my TA to grade it. Homework is considered late if I receive it after we have finished grading those assignments handed in on time. Late homework cannot receive a grade higher than a C once I have returned those turned in on time. I waive the late penalty for excused absences, but you are still responsible for doing the homework.
5. A classroom is a community, so I trust you will act as a mature and responsible citizen and treat each other with respect and courtesy. As one courtesy to your classmates, set your cell phones to vibrate and leave the class if you must take a call.

University

1. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Office of Disability Equity, please contact them in Lommasson Center 154. I will work with you and the Office of Disability Equity to provide an appropriate modification. For more information, visit the [Office of Disability Equity](https://www.umt.edu/disability/) website (<https://www.umt.edu/disability/>).
2. All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](http://www.umt.edu/student-affairs/community-standards/) (<http://www.umt.edu/student-affairs/community-standards/>). Academic dishonesty will result in a score of zero for the work in question and possible university sanctions.
3. The University sets deadlines for adding classes, dropping classes, changing grade options, and changing to or from audit status. These policies can be found at the [Registrar's web page](https://www.umt.edu/registrar/students/drop-add/default.php) (<https://www.umt.edu/registrar/students/drop-add/default.php>) while the actual dates for this term can be found on the [Registrar's calendar](https://www.umt.edu/registrar/calendar/autumn-2021.php) (<https://www.umt.edu/registrar/calendar/autumn-2021.php>).
4. UM has a Cultural and Ceremonial Leave Policy which states: "Cultural or ceremonial leave allows excused absences for cultural, religious, and ceremonial purposes to meet the student's customs and traditions or to participate in related activities. To receive an authorized absence for a cultural, religious or ceremonial event the student or their advisor (proxy) must submit a formal written request to the instructor. This must include a brief description (with inclusive dates) of the cultural event or ceremony and the importance of the student's attendance or participation. Authorization for the absence is subject to approval by the instructor. Appeals may be made to the Chair, Dean or Provost. The excused absence or leave may not exceed five academic calendar days (not including weekends or holidays). Students remain responsible for completion or make-up of assignments as defined in the syllabus, at the discretion of the instructor."

Calendar:

This schedule of topics is subject to modification. All changes will be announced in class.

| Wk | Date | Topic | Assignments | Quizzes |
|----|-------------------------|---|-------------|------------|
| 1 | 8/30 9/1 9/3 | Introduction Math: Derivatives Math: Optimization | | |
| 2 | 9/6 9/8 9/10 | <i>Holiday</i> Math: Duality Review of Supply and Demand | Hmk 1 due | |
| 3 | 9/13 9/15 9/17 | Elasticity: Definition Elasticity: Equation Elasticity: Arc and application | Hmk 2 due | |
| 4 | 9/20 9/22 9/24 | Consumer Theory: Preferences Quiz 1 Consumer Theory: MRS | | Quiz 1 |
| 5 | 9/27 9/29 10/1 | Consumer Theory: Ordinary Demand Consumer Theory: Extensions Consumer Theory: Income effect | Hmk 3 due | |
| 6 | 10/4 10/6 10/8 | Quiz 2 Consumer Theory: Compensated Consumer Theory: Extensions | | Quiz 2 |
| 7 | 10/11 10/13 10/15 | Consumer Theory: Wrap up Welfare: Definitions Welfare : CS applications | Hmk 4 due | |
| 8 | 10/18 10/20 10/22 | Quiz 3 Theory of the Firm: Production fcn Theory of the Firm: Supply thru cost | | Quiz 3 |
| 9 | 10/25 10/27 10/29 | Theory of the Firm: Supply thru profit Theory of the Firm: Wrap up Perfect Competition: Cost curves | Hmk 5 due | |
| 10 | 11/1 11/3 11/5 | Quiz 4 Perfect Competition: Graphs Perfect Competition: Math | | Quiz 4 |
| 11 | 11/8 11/10 11/12 | Perfect Competition: Extensions Welfare #2: Markets Welfare #2: Application | Hmk 6 due | |
| 12 | 11/15 11/17 11/19 | Monopoly: Basics Monopoly: Antitrust Quiz 5 | Hmk 7 due | Quiz 5 |
| 13 | 11/22 11/24 11/26 | Imperfect Competition <i>Travel Day</i> <i>Holiday</i> | | |
| 14 | 11/29 12/1 12/3 | Imperfect Competition General Equilibrium Information | Hmk 8 due | |
| 15 | 12/6 12/8 12/10 | Public Goods Externalities Wrap up | Hmk 9 due | |
| 16 | 12/17 (Friday) | Final Exam 8:00-10:00 | | Final Exam |