

The University of Missouri-Columbia  
Economics 9451, *Advanced Microeconomic Theory I*

Fall 2018

Professor Mandy

>> **PLEASE READ AND RETAIN THIS SYLLABUS**<<

- I. **References.** The primary text is my book *Producers, Consumers and Partial Equilibrium*. The course will work through this book. Two standard texts that add useful breadth are Mas-Colell, Whinston, and Green's (MWG), *Microeconomic Theory* and Varian's *Microeconomic Analysis* (third edition). A concordance between my book and these two texts is posted on the course website. These two books are expensive but will likely be used in the second semester of the micro theory sequence so eventually you will probably have to purchase at least one of them.
- II. **Evaluation.** Practice exercises will be assigned throughout the semester, collected and graded. These exercises will count 20% of the course grade. There will also be three midterm exams and a final exam that each count 20% of the course grade. Please note that **THERE ARE NO MAKEUPS** for the tests. In the extraordinary event that a missed test is absolutely unavoidable, you must notify the instructor at the earliest possible date and documentation will be required before any alternative arrangements are considered. Similarly, late practice assignments will not be accepted without timely documentation that a late assignment is absolutely unavoidable.
- III. **Class Meetings.** Mondays and Wednesdays 11:00 – 12:50 PM in 245 Walter Williams Hall from August 20 through December 5 except for Monday, September 3 (Labor Day holiday) and the week of November 19 and 21 (Thanksgiving recess).
- IV. **Office Hours.** Fangda Wang will be the grader for this course. He can be contacted by email at [fw48n@mail.missouri.edu](mailto:fw48n@mail.missouri.edu). He will not hold regular office hours but will meet by appointment to discuss questions related to grading. All questions regarding class content should be directed to me. My office hours are Mondays and Thursdays 3:00 – 4:00 in 228 Professional Building (usually, but it is best to email for an appointment to [MandyD@missouri.edu](mailto:MandyD@missouri.edu)). I will sometimes post materials on the course website at <http://faculty.missouri.edu/mandyd/econ9451/econ9451.html>.
- V. **Academic Integrity.** Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the

- course instructor. Students should also obtain, read, and be sure they understand the Department of Economics' Statement on Academic Honesty. This Statement is available on the course website.
- VI. **Disabilities Accommodations.** If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with us, or if you need to make arrangements in case the building must be evacuated, please inform us as soon as possible. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please establish an accommodation plan with the Disability Center (<http://disabilitycenter.missouri.edu>), S5 Memorial Union, 573-882-4696, and then notify us of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.
- VII. **Intellectual Pluralism.** The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the [Office of Students Rights and Responsibilities](#) or the [MU Office for Civil Rights & Title IX](#). All students will have the opportunity to submit an anonymous evaluation of the instructors at the end of the course.
- VIII. **Academic Inquiry, Course Discussion and Privacy.** University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of [section 200.020](#) of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.
- IX. **Student Preparation.** A microeconomics course at the level of Economics 7451 and mathematics training at the level of Economics 8370 are required prerequisites. Exceptions are granted only by instructor's consent. These are minimal requirements. The well-prepared student will also have 3 semesters of calculus, one semester of linear algebra, and perhaps a semester of advanced calculus.

X. **Course Schedule.**

Part 1: Crash Course in Optimization

Mon, Aug 20: §§1.1 - 1.2 continuity; §§1.3 - 1.4 (semi) definite matrices & multivariate derivatives.

Wed, Aug 22: §1.5 homogeneity; §1.6 envelope theorem.

Mon, Aug 27: §§2.1 - 2.4 calculus of optimization with an "active" constraint.

Wed, Aug 29: §§3.1 - 3.4 properties of (quasi) convex functions.

**First Exam Wednesday, September 5**

Part 2: Producers

Mon, Sep 10: §4.1 production sets.

Wed, Sep 12: §4.2 profit maximization.

Mon, Sep 17: §4.3 - 4.5 Hotelling's Lemma, the substitution matrix & further aspects of profit maximization.

Wed, Sep 19: §§5.1 - 5.3 duality (of the profit maximum).

Mon, Sep 24: §5.4 duality of the choice correspondence.

Wed, Sep 26: §§6.1 - 6.2 cost minimization, Shephard's Lemma & the substitution matrix; §§6.3 - 6.4 further aspects of cost minimization.

Mon, Oct 1: §§6.5 - 6.7 duality of the cost minimum.

Wed, Oct 3: §§7.1 - 7.4 relationships between cost and output.

Mon, Oct 8: §7.5 short- and long-run costs; §7.6 supply.

**Second Exam Wednesday, October 10**

Part 3: Consumers

Mon, Oct 15: §§8.1 - 8.3 preferences.

Wed, Oct 17: §§9.1 - 9.4 expenditure minimization.

Mon, Oct 22: §§10.1 - 10.2 utility maximization.

Wed, Oct 24: §§10.3 - 10.4 relationship between expenditure minimization & utility maximization; §10.5 comparative statics of the utility maximum.

Mon, Oct 29: §11.1 duality of indirect utility.

Wed, Oct 31: §§11.2 - 11.3 revealed preference & integrability.

Mon, Nov 5: §§12.1 - 12.2 compensating & equivalent variations; deadweight loss.

**Third Exam Wednesday, November 7**

Part 4: Partial Equilibrium

Mon, Nov 12: §§12.3 - 13.2 aggregate demand & supply.

Wed, Nov 14: §§13.3 - 13.4 competitive equilibrium & efficiency.

Mon, Nov 26: §13.5 long-run competitive equilibrium.

Wed, Nov 28: §§14.1 - 14.3 monopoly.

Mon, Dec 3: §15.1 game theory.

Wed, Dec 5: §§15.2 - 15.3 Cournot & Bertrand oligopolies.

**Fourth Exam Tuesday, December 11 (10:00 AM – 12:00 PM in the regular classroom; not cumulative)**