

**CAS EC221(A1)**  
**Intermediate Microeconomic Theory**

**Boston University**  
**Spring 2024**

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**OFFICE HOURS: (IN PERSON)** T 1-2:30 PM & R 6-7:30 PM RM.309, 270 BAY STATE RD.  
(REMOTE) T 1-2:30 PM ONLINE VIA ZOOM  
(Web link to online office hours will be provided on the course website.)

**LECTURES:** TR 11:00 AM - 12:15 PM KCB 102

**TEXT:** Jeffrey M. Perloff, *Microeconomics (9<sup>th</sup> ed.)*, Pearson 2023

**GRADE:** Exam 1 [25%] + Exam 2 [25%] + Exam 3 [50%]  
\*\*\* No make-up exams will be given. \*\*\*

(Coverage, format and logistics of the exams will be announced in class and on the course website.)

**COURSE DESCRIPTION:** This course revolves around three themes: *economic decisions*, *economic institutions*, and *economic efficiency*.

The most important and most studied economic institution is the *market*. Markets coordinate the activities of the whole economy, bridge production and consumption, relate households and firms. Microeconomic analysis provides a coherent theory about how decisions are made in each sector of the economy, how economic competition takes place through the mediation of the market, how prices are determined and how resources are allocated under the market.

The ultimate economic question, however, is whether this allocation of resources is *efficient*. We shall identify conditions under which market is (nearly) efficient, and those under which it is not. Building on this foundation, we can begin to understand why and how the market institution should be modified and extended by appropriate and effective economic policies, and the economic impact of government and other socio-economic institutions.

As time permits, during this grand tour we will also encounter topics such as *economic decisions under uncertainty and over time*, *game theory*, as well as *market power*, *economic externalities*, *asymmetric information*, and their effects on markets and resource allocations.

Although real-life examples will be used to illustrate every topic we discuss, the emphasis of this course is analytical. We shall examine assumptions that capture some basic facts about decision-makers and institutions, and try to derive consequences that offer economic insights. Being a course intended for students majoring in Economics and Mathematics, mathematical tools and graphical methods will be used freely and extensively (calculus, linear algebra, probability and optimization theories). Even more importantly, the student must be willing to engage in rigorous logical and critical thinking. To succeed in this course practice in solving problems is essential, in addition to reading and attending lectures.

**COURSE SCHEDULE:** See attached.

**COURSE WEBSITE:** <http://learn.bu.edu/> (BLACKBOARD)

**ACADEMIC CONDUCT:** It is the student's responsibility to read, understand and observe the *Academic Conduct Code* (<http://www.bu.edu/academics/resources/academic-conduct-code/>, also available from CAS Advising and Student Academic Life). Cases of suspected misconduct will be referred to the Dean's Office. Furthermore, acts of plagiarism or cheating will be penalized with failing grades.

**BU HUB LEARNING OUTCOMES:**

EC221 can fulfill the learning outcome of any one of the following Hub areas.

- **Quantitative Reasoning I**
- **Social Inquiry II**
- **Critical Thinking (from the Intellectual Toolkit)**

**ECONOMICS DEPARTMENT OUTCOMES:**

- EC221 is a core requirement for the BA in Economics and Mathematics. But any student can choose to take it as an alternative to EC201.
- BA/MA students are required to take EC501 for the MA component of their dual degree. Please check with your undergraduate advisor how that would impact your BA requirements in intermediate microeconomics.
- Majors in other fields should consult academic advisors in their own department.

**COURSE SCHEDULE** Details of this schedule are subject to change. Registered students can log into the course website at <http://learn.bu.edu/>. You should visit this website frequently to get the latest course schedule, check announcements, obtain class material and verify your personal grading record.

- ◆ LECTURE complements READING and self-study. They are not substitutes. To do well in this course, you must understand both thoroughly. Reading assignments in this schedule refer to Perloff's book. Supplementary reading may be assigned or suggested from time to time.
- ◆ HOMEWORK problems are specified as follows: "2.1.7" refers to question 1.7 in the "Questions" sections at the end of Chapter 2 of Perloff. "2.1.1-3" means questions 2.1.1, 2.1.2 and 2.1.3. "2.5.4,6,8,10" means questions 2.5.4, 2.5.6, 2.5.8 and 2.5.10. Supplementary problems may be provided. Homework will not be collected or graded. But you can only master the course material by working through the assignments systematically, thoroughly and in a timely manner. Moreover, portions of the exams will be modeled closely on homework problems.
- ◆ SOLUTION to homework problems and exams will be posted on the course website as the course progresses. But you will not benefit from the solutions unless you have first worked on the problems seriously. Answers to some, but not all, homework problems can also be found at the back of the book.
- ◆ An EXAM will test your comprehensive understanding of all the course material up to the time of the exam. Again, portions of the exams will be modeled closely on homework problems.

| DATE  | LECTURE  | READING | HOMEWORK   |
|-------|--|---------|--|
|       | <b>Method and Objective of Micro-economics</b>   |         |  |
| R1/18 | Economic Allocations – Efficiency & Equity   | Chap.1  |  |
| T1/23 | Economic Decision & Economic Institutions –<br>'The Law of Demand and Supply'                        |         | 2.1.1-3,7 2.2.1-3  |
|       | <b>Consumers &amp; Demand Theory</b>   | Chap.2  | 2.3.4-5 2.4.7-8 2.5.4,6,8,10                             |
| R1/25 | Demand Curves & Demand Elasticities  | Chap.3  | 3.1.3 3.2.1,7,11   |
|       | Effects of Government Interventions on Consumption<br>The Consumer Surplus                           |         | 3.3.1,2,4 3.4.1,4,7,10-13                                |
| T1/30 | Consumption Choice:<br>Preference & Utility, Budget Constraint                                       | Chap.4  | 4.1.3,5,6 4.2.1-3,5-8                                    |
| R2/01 | Marginal Utility & Marginal Rate of Substitution<br>Substitutes & Complements                        |         | 4.3.1-2,5 4.4.1,5-9,15,21<br>4.5.2                       |
| T2/06 | Changes in Income and Prices, Demand Curves<br>Income and Substitution Effects<br>Leisure vs. Income | Chap.5  | 5.1.1,2,4,7 5.2.3-4<br>5.3.1-3 5.4.2-3<br>5.5.1-3,5,8,13 |
|       | <b>Producers &amp; Supply Theory</b>   |         |  |
| R2/08 | Firms: Ownership, Management, Profit<br>Output Decision, Supply Curve                                | Chap.6  | 6.1.1-3<br>6.2.3 6.3.1-4, 6, 7                           |
| T2/13 | Technology Decision<br>Marginal Product, Marginal Cost, Returns to Scale                             |         | 6.4.4-10,12 6.5.4,7<br>6.6.1,2,4                         |
| R2/15 | Economic Cost<br>Short Run vs. Long Run<br>Entry & Exit Decision                                     | Chap.7  | 7.1.2,4<br>7.2.4,6,7,9,11<br>7.3.1-5,12 7.4.1,4          |

| DATE  | LECTURE  | READING              | HOMEWORK   |
|-------|--|----------------------|--|
| T2/20 | Multi-product firms & Economy of Scope<br>Quality Decision                                       |                      | 7.5.1  |
|       | <b>Perfect Competition &amp; Market Equilibrium</b>  |                      |  |
| R2/22 | Perfect Competition & Price-Taking Behavior<br>Short Run vs. Long Run Competition                | Chap.8               | 8.1-3                      8.2.2-4<br>8.3.1-4,7-9,13,19      8.4.1,4,10,12   |
| T2/27 | Social Welfare & Social Efficiency<br>Effects of Taxes, Subsidies & Regulations                  | Chap.9               | 9.1.1    9.2.1    9.3.2    9.4.1    9.5.2,5,6<br>9.6.2,6,7,9,11,12,14    9.7.2,3,5,8                               |
| R2/29 | General Equilibrium of the Economy   | Chap.10              | 10.1.1-5,7,8    10.2.1,2,4    10.3.1   |
| T3/05 | <u>EXAM 1</u><br><i>Covers material through 2/20</i>   |                      |  |
| R3/07 | Efficiency & Equity of the Equilibrium Allocation<br><Spring Recess>                             |                      | 10.4.2,5,6              10.5.1,3   |
|       | <b>Market Power: Monopoly</b>  |                      |  |
| T3/19 | Barriers to Entry, Causes of Monopoly  | Chap.11              | 11.1.1,3,6,10,12,13      11.2.3,6,11   |
| R3/21 | Price, Output & Inefficiency of a Monopoly<br>Regulation, Taxation & De-regulation of Monopolies |                      | 11.3.1,2,4                      11.4.1,2,5<br>11.5.2,4,6                      11.6.2                               |
| T3/26 | Price Discrimination by a Monopoly   | Chap.12              | 12.1.3,7    12.2.6                      12.3.2,10,11<br>12.4.1-2    12.5.1-2                      12.6.4    12.7.4 |
|       | <b>Market Power and Strategies: Oligopolies</b>  |                      |  |
| R3/28 | Game Theory<br>Oligopoly: Collusion & Strategic Interactions                                     | Chap.13, 14          | 14.1.2-8,11-15                      14.2.1<br>14.3.1-7,13,14    14.4.3    14.5.1-2                                 |
| T4/02 | Non-cooperative Oligopoly: the Cournot Model<br>Approaching Perfect Competition                  | Appendix 13A         | 13.1.1                                      13.2.1,4,7<br>13.3.2,3,5,7,8,9,12                      13.4.1,4,5,6    |
| R4/04 | Non-cooperative Oligopoly: the Bertrand Model<br>Product Differentiation                         |                      | 13.5.1<br>13.5.5-7                                      13.6.6   |
| T4/09 | <u>EXAM 2</u><br><i>Covers material through 3/28</i>   |                      |  |
|       | <b>Time and Uncertainty</b>  |                      |  |
| R4/11 | Supply of Capital, Investments & Interest Rate   | Chap.16, Appendix16A | 16.1,4,7,12,13    16.2.2,9,10,18    16.3.2-3   |
| T4/16 | Uncertainty, Risk and Insurance  | Chap.17              | 17.1.1-3    17.2.1,3,7,10,11    17.3.1,3<br>17.4.1-3    17.5.1-2   |
|       | <b>Economic Externalities</b>  |                      |  |
| R4/18 | Negative Externalities: Pollution, Common Property   | Chap.18              | 18.1.3-4    18.2.1-2    18.3.5    18.4.2   |
| T4/23 | Positive Externalities: Public Goods   |                      | 18.5.1,3    18.6.5-7,12  |
|       | <b>Asymmetric Information</b>  |                      |  |
| R4/25 | Adverse Selection, Signaling and Screening   | Chap.19              | 19.1.2,7,11    19.2.3    19.3.3    19.4.1    19.5.2-6  |
| T4/30 | Moral Hazard, Contracting  | Chap.20              | 20.1.8                      20.2.4,11    20.3.2-3    20.4.2  |

M5/06 EXAM 3 <12-2pm> *Covers material from the whole course*

\*Final exam schedule is subject to confirmation or change by the University Registrar's official announcement later in the semester.