Econ 493 - Spring 2020
Mathematical Economics

General Information

Class Schedule:  
- Section 1-Monday, Wednesday, 5:30-7:00pm, Seigle L002
- Section 2-Tuesday, Thursday, 5:30-7:00pm, Seigle L002
Instructor:  Weiting Hu
Office Hours:  Thursday, 3:00-5:00pm or by appointment
Office:  Seigle 358
Email:  weiting.hu@wustl.edu

Prerequisites

Econ 1011 (Introduction to Microeconomics), Econ 1021 (Introduction to Macroeconomics), Math 132 (Calculus II)

Course Description

The objective of this course is to develop the mathematical tools necessary for the study of intermediate micro- and macro-economics theory and the advanced electives in economics. Topics will include partial and total differentiation, unconstrained and constrained optimization, and basic probability theory. By the end of the class, students should know how to apply the tools in solving mathematics problems as well as applied economics problems.

Dropping/Adding Course and Grading Option

1. Students taking this course, and not Math 233 (Calculus III), must take Econ 493 for a letter grade. P/F and audit are grade options ONLY for students who’ve previously completed Math 233.
2. All grade option choices must be finalized by January 21, 2020. Requests for changes in the grade option must be directed to Dorothy Petersen (dottie@wustl.edu).

3. The last day to add or drop the course (with a “D”) is January 21, 2020. There is no option to withdraw (i.e., take a “W”) from this course, except in the case of illness or emergency. Students cannot use Webstac to add, drop, or withdraw from this course after the first session – contact dottie@wustl.edu for scheduling issues.

Assignments/Final Exam

There will be 4 homework assignments and a closed book final exam on February 24, 2020 for Section 1 and February 25, 2020 for Section 2 during class time. Discussing homework with others is encouraged, but each student must submit his/her own assignment. The final exam will be based on lecture material and problems related to the assignments.

Grading

Homework: 40% (Each assignment is 10%)
Final Exam: 60%

Homework is due at the beginning of the class on the due date. Late homework will not be accepted. If you are taking this course with P/F or CR/NCR, you must receive a C- or better to receive a ‘P’ or ‘CR’. Students requiring testing accommodations need to send me their letter from Disability Resources by Monday, February 3, 2020.

Notes

1. The course will have its own notes. Textbook is not required, but we will use Mathematics for Economists, 4th edition by Pemerton & Rau for reference.

2. Students can take the exam on either of the two sections, on Feb 24th or Feb 25th.
3. Learning mathematics requires lots of practice. If you’re stuck in some questions, feel free to come to ask me during office hours. If you still have other problems, please email me or make additional appointments.

**Course Schedule (Tentative)**

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<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
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<tbody>
<tr>
<td>20th No Class</td>
<td>21st Total Differentiation</td>
<td>22nd Total Differentiation</td>
<td>23rd No Class</td>
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<tr>
<td>27th Unconstrained Optimization (A1 due)</td>
<td>28th Unconstrained Optimization</td>
<td>29th Constrained Optimization</td>
<td>30th Constrained Optimization</td>
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<tr>
<td>[Feb 3rd] Lagrange Multipliers (A2 due)</td>
<td>4th Lagrange Multipliers</td>
<td>5th No Class</td>
<td>6th No Class</td>
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<td>10th Envelope Theorem (A3 due)</td>
<td>11th Envelope Theorem</td>
<td>12th Probability Theory</td>
<td>13th Probability Theory</td>
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<td>24th Final Exam</td>
<td>25th Final Exam</td>
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