Econ 493 - Mathematical Economics

Instructor: David Lindequist

Fall 2017

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Class	: Section 1 MW 5:30 pm - 7:00 pm (Seigle L004)
	Section 2 TR 5:30 pm - 7:00 pm (Seigle L004)
Office	: Seigle 377
Office Hours	: M 10:30 am - 12:30 pm and by appointment
Email	: david.lindequist@wustl.edu
Textbook (optional)	: Pemberton and Rau (2015) Mathematics for Economists:
	An Introductory Textbook, 4e, Manchester University Press

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Course Description

This short course introduces students to the mathematical tools used in upper-level economics courses. The course consists of lectures in mathematical theory and examples of applications in economics. The focus will be on multivariable calculus and constrained maximization. By the end of the course students will be comfortable with some of the most frequently used mathematics in economic analysis. Feel free to email me if you have any questions regarding the course content.

Prerequisites

Prior completion of Econ 1011 (Introduction to Microeconomics), Econ 1021 (Introduction to Macroeconomics), Math 132 (Calculus II).

Drop/Add Course and Grade Option

1. Students taking this course, and not Math 233, 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 Wednesday, September 6, 2017. 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 Wednesday, September 6, 2017. 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.

Grading

- Your final grade will be a weighted average of your scores from the quiz, the four problem sets and the final exam.

- The quiz will take place during the first 20 minutes of class on Sep 11th and Sep 12th. It will be worth 10% of your final grade.

- Each problem set is worth 10% of your final grade.

- The final exam will be on October 9 for session 1 and October 10 for session 2. It will account for 50% of your final grade.

- If you are taking this course P/F or CR/NCR, you must receive a C- or better to receive a 'P' or 'CR.'

- Students requiring testing accommodations must send their Cornerstone-provided "VISA" to me by September 16.

- Academic Integrity: The homeworks and the final exam are to be your own work. As such, evidence to the contrary will result, initially, in a failing grade on the homework/exam, and immediate academic disciplinary action. If you ever feel that these standards of academic integrity are not being met, please notify me or an undergraduate advisor immediately. If you are uncertain about the policy on academic integrity at Washington University, refer to https://wustl.edu/about/compliance-policies/academic-policies/undergraduate-student-academic-integrity-policy

Course Calendar

The following calendar is tentative and subject to change. The numbers in brackets indicate the relevant chapters from the textbook.

Monday	Tuesday	Wednesday	Thursday
Aug 28th **1** **Introduction (6,7)**	29th **2** **Introduction (6,7)**	30th **3** **Partial Differentiation (14)**	31st **4** **Partial Differentiation (14)**
Sep 4th **5** *No Class*	5th **6** **Total Differentiation (15)** **PS1 due**	6th **7** **Total Differentiation (15)**	7th **8** *No Class*
11th **9** **Constrained Optimization (17)** **QUIZ**	12th **10** **Constrained Optimization (17)** **QUIZ**	13th **11** **Constrained Optimization (17)**	14th **12** **Constrained Optimization (17)**
18th **13** **Constrained Optimization (18)**	19th **14** **Constrained Optimization (18)** **PS2 due**	20th **15** **Constrained Optimization (18)**	21st **16** **Constrained Optimization (18)**
25th **17** **Probability & Expectation (21)**	26th **18** **Probability & Expectation (21)** **PS3 due**	27th **19** **Probability & Expectation (21)**	28th **20** **Probability & Expectation (21)**
Oct 2nd **21** **Applications & Practice**	3rd **22** **Applications & Practice** **PS4 due**	4th **23** **Review**	5th **24** **Review**
9th **25** **Final Exam**	10th **26** **Final Exam**	11th **27**	12th **28**

Notes:

- Feel free to switch back and forth between the two sections. You can take the final exam on either of the two dates.

- This course will be based on the textbook by Pemberton and Rau (2015). The lectures are self-contained, so the textbook is not required. However, a decent math book is a valuable asset for your career as an economist anyways, so you might want to consider buying one for future reference.

- Practice is key when it comes to understanding and applying the concepts in this class. The problem sets will be the most effective way for you to digest the course material and to make sure that you are able to apply the techniques and methods presented in class. The final exam will reflect the difficulty of the problem sets and hence, solving the problem sets is the best preparation for the final exam.

- Problem sets are due on Tuesdays by 5:30pm. You can either submit them in class or you can put them into the course folder in Seigle 307 (the 307 office closes at 5pm sharp). I will return the homeworks to you in a separate class folder in Seigle 307.

- You are allowed to work on the problem sets in groups. However, everybody is required to submit an individual copy of the solution.

- Make sure to check Blackboard regularly. I will upload all relevant material there.

- My office hour is Monday from 10:30am to 12:30pm and by appointment.