ECONOMICS 340–Introduction to Mathematical Economics

Course: ECON 340-001 (MW, 3-4:15pm), Robinson B222
Term: Spring 2017
Instructor: Zachary Bartsch
Office hours: MW 1:15-2:45pm, Mason Hall D167-2
Email: zbartsch@masonlive.gmu.edu
Online: Blackboard & Facebook: GMU Econ 340-01 Spring 2017

Objectives

You will learn the fundamental mathematical applications of microeconomics and tools to help you address macroeconomic data. Methods include derivatives, integrals, and matrices. Applications include utility, supply & demand, marginal & average concepts, using data, indifference curves, as well as other fundamental economic concepts.

Prerequisites

I will assume that all students in this course are comfortable with basic math: arithmetic, algebra, geometry, calculus. I also assume that you have completed both principles of economics courses. If you have concerns about these prerequisites, please feel free to discuss your concerns with me.

Texts

Required: Schaum's Outlines: Introduction to Mathematical Economics (3rd Edition)
Recommended: Fundamental Methods of Mathematical Economics (3rd Edition) by Chiang ISBN: 0-07-010813-7

Classroom Norms

During lecture, I ask that students raise their hands before speaking. Attending class is not mandatory. Providing real-time feedback is absolutely essential for an enjoyable course. Do not be afraid of providing wrong oral answers.

Grading Procedures

There are two midterms and a final exam - all will be cumulative. The best way to study for the exams will be to attend class, do homework, pay attention to Facebook, and complete the extra credit. There is only one homework assignment. Extra credit is scored and weighted at my discretion and added to the corresponding exam. Scores and grades will not be curved. There are no excused absences, extensions, or rescheduled deadlines except by university-wide announcement. You will earn an "F" as your overall grade if you do not complete the final exam (GMU grading details are posted here). Attendance will not be taken. Three grading schemes are available and will be selected according to what is most advantageous for each student.

Grade	Score
A+	>96.66 %
A	>93.33 %
A-	>90 %
B+	>86.66 %
B	>83.33 %
B-	>80 %
C+	>76.66 %
C	>73.33 %
C-	>70 %
D	>60 %
F	<60 %

Extra Credit

Points from each of the three extra credit assignments will be added to the corresponding exam. I will weight the extra points such that the median exam score is raised to 80% of the total possible points. If the median exam grade is greater than 80% before the extra credit is added, then I will weight the extra credit such that the median score increases by 1%.

Please be familiar with the honor code. If you have a disability which requires academic accommodation, please contact the Office of Disability Services (703 993 2474) for details immediately.

Notice, I may be absent for 1-2 classes due to the birth of my daughter. I will attempt to schedule a make-up class. The schedule of exams and due dates will not be affected.

	Scheme 1	Scheme 2	Scheme 3
Homework	10%	10%	10%
Exam 1	20%	0%	0%
Exam 2	30%	40%	0%
Final Exam	40%	50%	90%

Course Outline

Week	Date	Material	Due Dates
1	23-Jan 25-Jan	Ch 1, Ch 2 Problems: 1.1-1.13, 2.1-2.6, 2.11-2.16 Introduction,Describing Functions, S&D, Utility, Welfare, Probability	
2	30-Jan 1-Feb	Ch 3: Last day to Add/Drop (Without Tuition Penalty) Problems: All Derivatives, Optimization, Marginal & Average	
3	6-Feb 8-Feb	Ch 4 Problems: All Derivative Applications, Welfare, Profit, Cost, TWP, Elasticity	6-Feb, Homework Due
4	13-Feb 15-Feb	Ch 7 Problems: All Exponential & Logorithmic Functions	
5	20-Feb 22-Feb	Ch 8 Problems: All Exp & Log Applications	22-Feb Extra Credit #1 Due
6	27-Feb 1-Mar	ch 9 Problems: 9.1-9.34 Exp & Log Derivatives, Exam Review	
7	6-Mar 8-Mar	Ch 5 Problems: 5.1-5.22 Multivariate Calculus	6-Mar, Exam #1
8	13-Mar 15-Mar	SPRING BREAK (NO CLASS)	
9	20-Mar 22-Mar	Ch 6 Problems: 6.1-6.3, 6.19-6.39, 6.41-6.52 Multivariate Calculus in Econ	
10	27-Mar 29-Mar	Ch 14 Problems: All Indefinite Integrals	
11	3-Apr 5-Apr	Ch 15 Problems: All Definite Integrals	29-Mar Extra Credit #2 Due
12	10-Apr 12-Apr	Integral Applications Probability Exam Review	
13	17-Apr 19-Apr	Two-Part Exam 17-Apr: Part 1 19-Apr: Part 2	Exam #2 (Cumulative)
14	24-Apr 26-Apr	Ch 10 Problems: All Introduction to Matrices	24-Apr Extra Credit #3 Due
15	1-May 3-May	Ch 11 Problems: 11.1-11.37 Matrix Inversion, Exam Review	
16	15-May	Final Exam (Cumulative) 1:30 pm – 4:15 pm	