Math Tools for Economists II
Econ 1088-200
Summer Term B, 2002
Syllabus and Tentative Outline

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Office hours: TBA
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Lecture time: Mon-Fri 11-12:35
Classroom: Econ 119

Course Description:
This course is a continuation of Econ 1078. Basically, it consists of two parts: derivatives and integrals (chapters 9-11 of the text). These tools will help you to better understand the mathematical framework on which economic models are based.

Prerequisite: Econ 1078 or equivalent.

Textbook:
Recommended: Student solution manual for Essentials of College Mathematics.
Recommended: A scientific calculator.

Grading:

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<thead>
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<tbody>
<tr>
<td>Homework</td>
<td>15 points</td>
</tr>
<tr>
<td>In-class Exam 1</td>
<td>25 points</td>
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<tr>
<td>In-class Exam 2</td>
<td>25 points</td>
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<tr>
<td>In-class Exam 3</td>
<td>25 points</td>
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<tr>
<td>Final</td>
<td>35 points</td>
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Homework will be assigned during each class. It is a vital part of learning to use math tools and its applications. They will be collected daily and I will grade part of them randomly. You are encouraged to work together, but your answers must be written individually to be sure that you understand, and get credit for your homework. Homework, exams and solutions will be posted on the course web site. Some class time will be set aside to go over homework assignments. No late homework will be accepted.

There will be three in-class exams and a compulsory cumulative final exam. Each in-class exam is worth 25 points (I will drop the lowest in-class exam grade). Your grade will be assigned based on the following scale:

<table>
<thead>
<tr>
<th>Average Points</th>
<th>94-100</th>
<th>90-93</th>
<th>87-89</th>
<th>84-86</th>
<th>80-83</th>
<th>77-79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>A</td>
<td>A-</td>
<td>B+</td>
<td>B</td>
<td>B-</td>
<td>C+</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Average Points</th>
<th>74-76</th>
<th>70-73</th>
<th>67-69</th>
<th>64-66</th>
<th>60-63</th>
<th>0-59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>C</td>
<td>C-</td>
<td>D+</td>
<td>D</td>
<td>D-</td>
<td>F</td>
</tr>
</tbody>
</table>
General Policies

1) It is the students’ responsibility to take control of their own education. Read the material in advance of lectures. Try to understand most of the materials during the lecture. Try to practice as much as you can. You can find a lot of exercises in your textbook. If you are having problems, I am more than happy to help you. Approach me after class, during regular office hours or by appointment.

2) No make-ups will be given unless prior permission is obtained and only in extremely extenuating circumstances.

3) The Economics Department will make reasonable accommodations for persons with documented disabilities. Students must notify their instructor no later than the first day of the class, and provide documentation of the disability obtained from the Disability Services Office located in Willard Hall, room 322. For more information, see the webpage of the Office of Disability Services, www.colorado.edu/sacs/disabilityservices

4) We will make reasonable accommodations for students who have conflicts between religious observance dates and course examinations or assignments. Please talk to me at the beginning of the semester, if you think you may require such accommodation.

For university policies on this and on other things, see www.colorado.edu/policies/index.html.

For university policies on cheating and plagiarism, and the university honor code, see www.colorado.edu/academics/honorcode/

Topics covered in the course include:

Chapter 9

9-1 Limits and Continuity. A geometric Introduction.
9-2 Computation of Limits
9-3 The Derivative
9-4 Derivative of Constants, Power Forms, and Sums
9-5 Derivative of Products and Quotients
9-6 Chain Rule: Power Form
9-7 Marginal Analysis in Business and Economics

Chapter 10

10-1 First Derivative and Graphs
10-2 Second Derivatives and Graphs
10-3 Curve Sketching Techniques
10-4 Optimization. Absolute Maxima and Minima
10-5 Derivative of Logarithmic and Exponential Functions
10-6 Application of Chain Rule to Logarithmic and Exponential Functions

Chapter 11

11-1 Antiderivatives and Indefinite Integrals
11-2 Integration by Substitution
11-3 Definite Integrals
11-4 Area under the curve and the Definite Integral
11-5 Economic Application of Definite Integrals: Consumer’s and Producer’s Surplus.