Math Tools For Economists II  
Econ 1088-002  
Fall 2001  
Syllabus

Instructor: Philip Gayle  
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Course Description:  
This class is a continuation of ECON 1078. It covers the calculus tools that you need to better understand the mathematical framework in which economics models are based.

Prerequisite:  
Econ 1078 or instructor's approval.

Textbook:  
Recommended: Study Guide for Essentials of College Mathematics  
Recommended: A scientific calculator.

Homework:  
Homework will be assigned during each class. It is a vital part of learning to use math tools and its applications. Homework will be collected at random and answers to random problems will be graded. You are encouraged to work together, but your answer must be written individually to be sure that you understand, and get credit for your homework. Some class time will be set aside to go over homework assignments.

Grading:  
<table>
<thead>
<tr>
<th>Score</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>94-100</td>
<td>A</td>
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<tr>
<td>90-93</td>
<td>A-</td>
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<tr>
<td>87-89</td>
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<td>84-86</td>
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<td>80-83</td>
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<td>77-79</td>
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<td>74-76</td>
<td>C</td>
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<td>70-73</td>
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<td>67-69</td>
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<td>64-66</td>
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<td>60-63</td>
<td>D-</td>
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<td>Below 60</td>
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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). The final is worth 35 points. There will be no make-ups. Your grade will be assigned based on the following scale.
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
10-6 Derivative of Logarithmic and Exponential Functions
10-7 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 and the Definite Integral
11-6 Economic Application of Definite Integrals: Consumers' and Producers' Surplus

Note: The Economics Department will make reasonable accommodations for persons with documented disabilities. Students must notify their instructor no later than the first week of term, and provide documentation of the disability obtained from the Disabilities Services Office Located in Willard Hall, Room 322.