Mathematics 108, Calculus II for Business, Spring 1999
Tentative Weekly Syllabus

Texts: Goldstein-Lay-Schneider:Calculus, Prentice Hall, 7th Edition. And "Math 108 Lecture Notes, Spring 1999" by Himonas and Howard, to which the numbers below refer.

Week 1

1.1 The Indefinite Integral

1.2 The Initial Value Problem

1.3 Integration by Substitution

Week 2

1.3 Integration by by Parts and Partial Fractions

- Do Computer Assigment 1 (antidifferentiation) in class on Mon or Wed

1.4 The Definite Integral of Nonnegative Functions

1.5 Definite Integral of General Continuous Functions and Area

- Do Comuter Assignment 2 (Riemann Sums) in class on Friday (or Mon)

Week 3

1.6 The Fundamental Theorem of Calculus

1.7 Integration by Substitution and by Parts in Definite Integrals

1.8 Area between two Curves

Week 4

- Review

- Exam 1, February 2, Tuesday, 8:00-9:15 AM

2.1 Average Value of Continuous Quantities

2.2 From Marginal Function to Total Function

Week 5

2.3 Consumer and Producer Surplus

- Do Computer Assigment 3 (CS and PS) on Mon or Wed

2.4 Future and Present Value of a Continuous Income Stream

Week 6

3.1 Improper Integrals

3.2 Numerical Methods - mention Extra Notebook 1

4.1 Differential Equations and Applications: Introduction

Week 7

4.2 Separable Differential Equations

4.3 The Logistic Growth Model

4.4 The Solow Growth Model - use Extra Notebook 2

Week 8

- Review

- Exam 2, March 2, Tuesday, 8:00-9:15 AM

5.1 Introduction, and Gaussian Elimination

Week 9: Sping Break

Week 10

5.2 Thee-Dimensional Spase

5.3 Planes and Linear Functions

6.1 Functions of Two Variables and Their Graphs

Week 11

6.1 Functions of Two Variables and Their Graphs (cont.)

- Use Computer Assignment 4 with Monday's lecture

6.2 Partial Derivatives

6.3 Maxima and Minima for Functions of Two Variables

Week 12

6.4 The Method of Least Squares or Lines of Regression

- Do Computer Assignment 5 with Least Squares

6.5 Constrained Optimization and Lagrange Multipliers

- Friday (Easter Break)

Week 13

- Monday (Easter Break)

6.5 Constrained Optimization and Lagrange Multipliers (cont.)

7.1 Experiments and Sample Spaces

Week 14

- Review

- Exam 3, April 13, Tuesday, 8:00-9:15 AM

7.2 Assignment of Probabilities

7.3 Discrete Random variables, Expected Values and Variances

Week 15

7.4 Continuous Random Variables

7.5 Expected Value, Variance, and Standard Deviation

7.6 Commonly Used Continuous Probability Densities

Week 16

- Finish 7.6, and start Review

- Review

Final Exam: May 6, 1:45-3:45 PM