Economics 480-580
Fall, 1979

Introduction to Mathematical Economics
Mrs. Mei-chu W. Hsiao
Sec. 2 (M,W,F)

Textbook: A. Chiang: Fundamental Method of Mathematical Economics,

Date:

Sept. 5  Chap. 3  Economic Models and Static Problems (3.1-3.3).
Sept. 10 Chap. 5  Inverse Matrix and Cramer's Rule (5.4-5.6)
Sept. 17 Chap. 5  Input-Output Models (5.7)
Sept. 24 Chap. 7  Marginal Function and Average Function (7.1-7.2)
Oct.  1  Chap. 7  Golden Rules of Differentiation and their use (7.3-7.5)
Oct.  8  Chap. 8  Total Differential and Elasticity of Demand (8.1-8.4)
Oct. 15 Chap. 8  Comparative Static Analysis of the IS-LM model (8.6)
Oct. 17  The First Test (Chap. 3, 5, 7)
Oct. 22 Chap. 9  Optimization without constraints (9.1-9.4)
Oct. 29 Chap. 10 Growth Equations and Growth Rates (10.1-10.2)
Nov.  5  Chap. 10 Total Differential and Growth Rates (10.4-7)
Nov. 12 Chap. 11 Multi-variable Model (11.1, 11.2)
Nov. 14  The Second Test (Chap. 8, 9, 10)
Nov. 19 Chap. 11 Price Discrimination, Isoquants (11.4, 11.5)
Nov. 22 Thanksgiving Day Break
Nov. 26 Chap. 12 Constrained Optimization (12.1, 12.2, 12.4)
          Utility Maximization and Demand Functions
Dec.   3 Chap. 12 Homogeneous Functions, Cost Minimizations, and
          Elasticity of Substitution (12.5, 12.6)

Final EXAM (Chap. 3 - 10, Chap. 11, 12).
References:

R.G.D. Allen: Mathematical Analysis for Economists, St. Martin's Press, 1938. Paperback edition available. This is a classic work which every economist, whether or not he is interested in Mathematical Economics, must be acquainted with. A must for graduate students.


T. Yamane: Mathematics for Economists: An Elementary Survey, Prentice Hall, 1962. Good exposition of basic quantitative methods (Differentiation, matrix, statistics). Fewer economic applications. There are many other textbooks on mathematics for economists. Most of them are survey type with more emphasis in techniques than economic applications. The following texts emphasize applications.


T. F. Dernburg and J. D. Dernburg, Macroeconomic Analysis, An Introduction to Comparative Statics and Dynamics, Addison-Wesley, 1969.