

Economics 331

Mathematical Economics

Professor Moody

Text: Chiang and Wainwright, *Fundamental Methods of Mathematical Economics (Fourth Edition)*

All readings, except Chiang and Wainwright are available on Blackboard in the Course Documents section. Readings from earlier editions of Chiang are also available in Blackboard.

Linear Algebra and General Equilibrium

Chiang and Wainwright, Chapters 1-5

Applied general equilibrium (Lenotief input-output analysis)

Linear Programming and Duality

Chiang Chapters 19,20 (Blackboard)

Bassi, L.J. "The Diet Problem Revisited," *The American Economist*, 20, Fall 1976, 35-39

Game Theory (two person zero sum games)

Chiang Game Theory (Blackboard)

Comparative Static Analysis

Chiang and Wainwright, Chapters 6-8

Macroeconomics

Allen, R.G.D. *Macro-Economic Theory*, ch. 7

Optimization

Chiang and Wainwright, Ch. 9-11.

Constrained Optimization

Chiang and Wainwright, Ch. 12

Nonlinear Programming

Chiang and Wainwright, Ch. 13

Baumol, W.J. *Economic Theory and Operations Analysis*. 4th ed., 1977, Ch. 7

Kuhn, "Duality in Mathematical Programming"

Takayama, A. "Behavior of the Firm under Regulatory Constraint." *American Economic Review* (1969) 255-260.

Applications

The Envelope Theorem (Chiang and Wainwright Ch 13)

Mathematical History

The Oil Crisis and Entitlements