INTRODUCTION TO MATHEMATICAL ECONOMICS

ECONOMICS 4/580  PROF. KEITH MASKUS
SECTION 1  OFFICE: ECON 115
FALL, 1981  HOURS: 1-3, M,W


Date:

9-2  Chap. 3 Economic Models and Static Analysis (3.1-3.3,3.5)  Note: Read Chapters 1 and 2 on your own.

9-11 Chap. 4 Matrix Algebra

9-16 Chap. 5 Matrix Inversion and Cramer's Rule (5.2,5.4-5.6)

9-21 Chap. 5 Input-Output Models (5.7)

9-28 Chap. 7 Marginal and Average Functions (7.1-7.2)

10-5 Chap. 7 Extended Rules of Differentiation (7.3-7.5)  Note: Read Chapter 6 on your own.

10-9 Chap. 8 Total Differential (8.1-8.4)

10-16 HOUR EXAM 1 (Chap. 3,5,7) - 30%

10-19 Chap. 8 Comparative Static Analysis of General Models (8.6)

10-23 Chap. 9 Optimization without Constraints (9.1-9.4)

10-30 Chap.10 Growth Equations and Growth Rates (10.1-10.3)

11-4 Chap.10 Total Differential and Growth Rates (10.4-10.7)

11-11 Chap.11 Multi-variable Model (11.1-11.2)

11-13 HOUR EXAM 2 (Chap. 8,9,10) - 30%

11-16 Chap.11 Price Discrimination, Isoquants (11.4,11.5)  Note: Read Section 11.3 on your own.

11-23 Constrained Optimization, Utility Maximization, and Consumer Demand (12.1,12.2,12.4)

12-4 Homogeneous Functions, Cost Minimization, and Elasticity of Substitution (12.5,12.6)

12-14 FINAL EXAM (CUMULATIVE) - 40% (3:30-6:30)
Notes

1. Test dates are virtually inviolable. If you must miss an exam, give me a written statement to that effect.

2. Homework - on time: 10 points
   late before grading  7 points
   late after grading   5 points

3. 5% of total homework grades will be added to the total test grades.
References for Econ 480/580, Section 1

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.

Textbooks on Micro and Macroeconomics which use more Mathematics.


T. F. Dernburg and J. D. Dernburg, Macroeconomic Analysis, An Introduction to Comparative Statics and Dynamics, Addison-Wesley, 1969. For the first year graduate students.

Textbooks on Calculus Recommended

G. B. Thomas: Calculus and Analytic Geometry, Addison-Wesley.

T. M. Apostol: Calculus, VI, VII

The following materials are reserved in the Norlin Library:
1. Instructors Manual (Answer Book) 5 copies
2. Tests given in Spring '81 (Section 1 and Section 2) Test I, Test II, and Final. 2 copies each