AGEC 622 3 Credits Spring 2006
(Mathematical Programming Part Weeks 1-4)

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Purpose: To introduce students to mathematical programming, emphasizing modeling, interpretation and problem analysis.

Conduct: For the first 3 ½ weeks we will have 2 lectures per week and lab sections

Class work **2** Homeworks
One Midterm

Test: One test will be given - at the end of Mathematical Programming. The test is closed book but one page may be brought in with any contents the student desires

Learning Objectives

To provide students with basic knowledge of:

The Mathematical Programming Approach
Linear Programming
- Theory - Matrix Solution, Interpretation
- Excel solution
- Common Formulations
- Applied Use

Basic relaxations of Linear Programming Assumptions

Textbooks: The course will be taught out of a draft text, Applied Mathematical Programming Using Algebraic Systems by Bruce A. McCarl and Thomas H. Spreen distributed through http://agecon2.tamu.edu/people/faculty/mccarl-bruce/622.htm

AGEC 622 Linear Programming Part
Outline

I. Introduction to Mathematical Programming – Overhead01 which is backed by McCarl/Spreen Chapter 1

II. Basic Linear Programming – Overhead02 which is backed by McCarl/Spreen Chapter 2

III. Solving a problem in Excel -– Overhead03 which has some support in terms of interpretation from McCarl/Spreen chapters 3 and 4

IV. Linear Programming Model Formulation - Overhead04 which is backed by McCarl/Spreen Chapter 5 Sections 5.2-5.5.2 ignoring GAMS and dual formulation material along with Chapter 6 sections 6.1 and 6.3 and some material in chapter 10.

V. Typical Model Formulations - Overhead05 which is backed by latter part of McCarl/Spreen Chapter 5 ignoring GAMS and dual formulation material along with Chapter 6 sections 6.1 and 6.3

VI. Including Risk Overhead06 which is backed by Chapter 14

VII. Including indivisibilities overhead07 which is backed by chapters 15 and 16

MIDTERM