

AREC 505
Agricultural Production Economics
Fall 2011

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Class Meets: Tuesdays and Thursdays, 12:30-1:45 p.m.; E206 Engr.

Textbook: Class handouts.
Supplemental/Optional text:
Agricultural Production Economics by David L. Debertin

Grading:	Homework	30%
	Exam I	30%
	Exam II	30%
	Final Project	10%

Course Objectives:

- To develop a better understanding of neoclassical microeconomic theory of the firm.
- To improve your understanding and use of mathematical and analytical skills applied to economic theory.
- To examine the limitations of the neoclassical model and to explore methods to address these limitations.
- To develop your ability to apply economic theory to real world situations.

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Course Outline

Topic

- I. Introduction
 - A. Production Theory in Economics (Debertin, Chapter 1)
 - B. Mathematical Review (Debertin, Chapter 8)

- II. Static Production Theory: One Input
 - A. The Production Function (Debertin, Chapter 2)
 - B. Profit Maximization (Debertin, Chapter 3)
 - C. Costs, Returns and Profits (Debertin, Chapter 4)
 - D. Duality, one input

FIRST EXAM

- III. Static Production Theory: Two Inputs
 - A. Production (Debertin, Chapter 5)
 - B. Maximization (Debertin, Chapter 6)
 - C. Constrained Maximization (Debertin, Chapter 7)
 - D. Designing a lease example
 - E. Duality, multiple inputs
 - F. Example of two inputs, one output (irrigation)
- IV. Static Production Theory: Insights
 - A. Factor and Technical (Total) Substitutability
 - B. Scale and Size (Debertin, Chapter 9)
 - C. Functional Forms (Debertin, Chapter 10 and 11)
 - D. Input Demand (Debertin, Chapter 13)
 - E. Variable Product and Input Prices (Debertin, Chapter 14)

SECOND EXAM

- V. Static Production Theory: Two Outputs
 - A. Production (Debertin, Chapter 15)
 - B. Optimization (Debertin, Chapter 16 and 17)
- VI. Risk and Uncertainty (Debertin, Chapter 20)
 - A. Concepts
 - B. Probability notions
 - C. Measuring risk
 - D. Risk management
 - E. Preferences
 - F. Discriminating among risky prospects without using utility functions
 - G. Risk simulation
- VII. Applications in Production

FINAL PROJECT – due during finals week