

Instructor: W. Marshall Frasier  
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Office Hours: 2:00-4:00p Mondays and 1:00-3:00p Wednesdays and or by appointment.

Textbooks: Farm Management  
 Ronald Kay, William Edwards, and Patrica Duffy  
 McGraw Hill, 6th Edition, 2008.

Applied Mathematical Programming Using Algebraic Systems  
 Bruce A. McCarl and Thomas H. Spreen  
<http://agecon2.tamu.edu/people/faculty/mccarl-bruce/books.htm> (also RamCT)

Selected readings posted on RamCT

Description: Economic principles of agricultural production decisions with linear programming (LP) analysis of production choices and farm planning.

Prerequisites: AREC 305 Agricultural Business and Resource Enterprise Analysis

Objective: This course will provide you with the analytic tools and practice to systematically evaluate management decisions that are pervasive in agriculture (inside and outside the farm gate). Some of the approaches investigated may not be directly applicable to your future career, but they will all enhance your ability to wrestle with the complexity so pervasive in agricultural decisions.

Grading Policy: Course grades will be based on examinations, quizzes, and problem sets. Two one-hour exams will be given. The components will be weighted as follows:

Lab Problems	260	points	(13 @ 20 pts. each)
Quizzes	100	points	(Best 3 of 4 @ 33 pts. each)
Mid-term Exams	300	points	(Exam I - 100, Exam II - 200)
Final Project Drafts	40	points	(2 @ 20 pts. Each)
Final Project	<u>100</u>	points	
Total	<u>800</u>	points	

Exams will be announced at least two weeks prior to being held. Some quizzes will be announced while others may not be. Failure to attend exams or quizzes without prior permission of an instructor will result in a score of zero. Problem sets will be considered late beyond the beginning of the class period prescribed due and will not be graded if not received before the solutions are posted.

Absences will be excused ONLY when (1) you initiate an oral conversation regarding an up-coming absence, (2) you send me an email stating the particulars of your absence, summarizing our prior oral agreement, and (3) you receive my email confirmation that the absence is excused. Exceptions only at my discretion.

Final grades will be assigned based on total point accumulations as follows:  
A = 90-100%; B = 80-89%; C = 70-79%; D= 60-69%; F = <60%. Requirements for each grade category may be adjusted downward but will not be raised. Pluses and minuses will be awarded at the instructors' discretion.

## Course Outline

<u>Week</u>	<u>Topic</u>
	I. <i>Introduction</i>
1-3	Production Theory (Kay, Ch 7-9)
	II. <i>Linear Programming</i>
4-5	Linear Programming (McCarl)
	III. <i>LP Modeling of Farm Production</i>
6-8	The Basic Farm Plan (Kay, Ch 12) Linking Intermediate Activities Introducing the BUY and SELL activity
	<b>Exam I, Wednesday, March 10, 9:00-9:50a</b> <i>(Note: Last day to withdraw from the course: Monday, March 22)</i>
9	Heterogeneous Resources
	III. <i>Applications</i>
10	Transportation Models
11	Blending Problems (Least Cost Ration Formulation)
12	Multiperiod Models
13	Incorporating Risk
	<b>Exam II, Friday, April 30, 8:00-9:40a</b>
14-15	IV. <i>Presentation of Student Projects</i>
16	<b>Final Exam, Monday, May 10, 9:10-11:10 am</b> (conclude presentations)

I have an "open door" policy for visitors in my office. You are always welcome to drop by if you have an issue that you wish to discuss with me. However, please realize that I have many other responsibilities beyond teaching this class, so I may be forced to schedule to meet with you later. I do schedule office hours each week that are set aside for meeting with students from this class. If at all possible, I prefer that you try to use this time to meet with me. I will make every attempt to be in the office during these hours and will try to announce in class the days that I will not be available during this time.

I welcome you to this course and look forward to sharing the next 16 weeks with you. I hope for you a fruitful and prosperous semester. Good luck to you!