

**UNIVERSITY OF FLORIDA**  
**Food and Resource Economics Department**

**AEB 5516 Quantitative Methods in Agribusiness**  
*Course Syllabus*  
*Spring Semester, 2007*

**Meeting Time and Location:** MWF 4<sup>th</sup> period, 3108 McCarty B

**Instructor:** Dr. Timothy G. Taylor  
1107 McCarty Hall  
E-mail: [tsquare@ufl.edu](mailto:tsquare@ufl.edu)  
Phone: 392-1845 ext. 411  
Secretary: Melanie Carter (1104B MCC)

**Required Text:** There is no required text. All relevant materials are available on the class website: : [www.agbuscenter.ifas.ufl.edu/aeb5516](http://www.agbuscenter.ifas.ufl.edu/aeb5516)

**Office Hours:** Tuesday and Thursday 1:00 PM to 3:00 PM. Other times may be arranged by appointment.

**Course Content:** The primary focus of this course is on business forecasting. A wide-range of business forecasting methods will be covered ranging from naïve techniques to advanced time series models. Emphasis in the course will be on the correct application of forecasting methodologies and use of the Microsoft Excel.

**Learning Objectives:** In large measure this is a course is about application and technique, not theory. Students should expect to understand the basic forecasting methodologies available for use, their particular strengths and weaknesses, and how to select and use the appropriate forecasting technique in any given situation.

**Format:** The class will be taught using a mix of the traditional lecture format and active learning through class discussion and problem solutions. Students should expect to be called upon to answer questions and to actively participate in class discussions

**Attendance Policy:** Class attendance is expected. The instructor should be informed of expected absences to the extent possible. Excessive unexcused absences will result in negative consequences.

**Homework Assignments and Exams:** Homework will be regularly assigned. These assignments are intended to provide incentives to student to remain current with course material and provide the ability of the instructor to monitor student progress. There will be two take-home exams given during the semester.

**Academic Honesty:** Adherence to the UF Academic Honesty Guidelines, including the Student Honor Code, is expected. In completing the application for admission to UF, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

**Software Use:** All faculty, staff and students of the University of Florida are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. *We, the members of the University of Florida pledge to hold our peers and ourselves to the highest standards of honesty and integrity.*

**UF Counseling Services:** Resources are available on-campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources include: University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling; Student Mental Health, Student Health Care Center, 392-1171, personal counseling; Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161x231, sexual assault counseling; and Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

**Grading System:**

The distribution of your semester grade is as follows:

Two Exams (@30% each)	60%
Homework assignments	30%
Participation	<u>10%</u>
Total	100%

The grading scale is as follows:

90% or greater -- A	77-79.99% ----- C+	60-66.99% ----- D
87-89.99% ----- B+	70-76.99% ----- C	Less than 60% --- E
80-86.99% ----- B	67-69.99% ----- D+	

## **Tentative Course Outline**

### **1. Introduction to Excel**

Introduction to basic use of Microsoft Excel including basic spreadsheet functions, data sorting, use of functions and add-ins, creation of pivot tables and graphing techniques.

### **2. Simple Moving Average Models and Differencing**

Basic moving average and differencing models and their models use in de-trending and de-seasonalizing data

### **3. Exponential Smoothing Methods**

Development of short-term forecasting models based on smoothing techniques. Simple exponential smoothing models, Holt and Winter's extensions and adaptive smoothing techniques

### **4. Classical Decomposition of Time Series**

Long term forecasting and data analysis using the classical method of decomposition and extensions.

## **Exam I**

### **5. Basics of Probability and Statistics**

Basic concepts of random variables, probability distributions, statistics and hypothesis testing.

### **6. Basic Linear Regression Models and Forecasting**

Development and use of simple and multiple Regression models and their use in forecasting and conditional prediction

### **7. Selected Topic in Regression Analysis**

Extensions of the basic linear regression model

### **8. Putting it All Together**

Practical tips for developing and professionally presenting business forecasts.

## **Exam II**