Course Syllabus
Economics 8812: Econometrics III
Spring 2019

Professor
David M. Kemme, Ph.D. 5:30-8:20pm T
Office hours: 1:30-3:00pm TR & by appointment
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Office hours: 8:00-9:30am TR

Course Overview:
This course provides an overview of time series econometrics theory and methods with applications. A firm understanding of basic econometrics, statistical inference, calculus and linear algebra is assumed.

Pre-Requisites/Co-Requisites:
Economics 7810/8810 or permission of instructor.

Required Texts, recommended and related materials:

Most lecture topics follow Enders, while Johnston and DiNardo may serve as an alternative explanation for some topics. Asteriou and Hall has excellent EViews examples. Brooks is the most elementary of the three and focuses on finance topics. Readings from these three texts will be noted on the course outline below. There are many interesting applications and
all of the estimation and testing is done using EViews, which we will use in this class. There are numerous other text books and reference books that may also be of interest.


We will use EViews for all exercises and applications. All data sets and programs mentioned in Enders are available in both Excel and EViews workfiles. Eviews is available on the TigerLan network. The student edition may be purchased directly from Quantitative Micro Software. This is recommended.

**Location of Course Materials:**

This is a face to face in classroom course. eCourseware will be used minimally. It may be used for distribution of data sets and problem sets. [eCourseware website](opens in new window).

**Course Objectives:**

- Identify, estimate and test basic time series models mainly for forecasting purposes.
- Model volatility
- Identify, estimate and test models with trend
- Identify, estimate and model multi-equation time series
- Identify, estimate and model cointegrated and error correction models

**Fogelman College: Learning Outcomes for Your Degree**

This course is one of many courses designed to assist you in meeting the learning goals of the Ph.D. program. They may be found here: [http://www.fcbeassessment.net/LearningOutcomes/PhDDegreeLearningOutcomes.pdf](http://www.fcbeassessment.net/LearningOutcomes/PhDDegreeLearningOutcomes.pdf)

**Examinations, Evaluation and Grading**

There will be four graded problem sets, or take-home exams, and a research paper. Each component is of equal weight (20%). Late assignments will not be accepted. Guidelines for the research paper will be provided in class. Final project/paper must demonstrate knowledge of the econometric methods discussed in this class and a project or paper from another class or anything co-authored may not be used for this class. Guidelines for the research paper will be provided in class. See also Chapter 13 of Brooks to start with. The plus and minus grading system will be used.

**Course Outline and Topics:**

I. Introduction to Difference Equations  
   E: Chapter 1  
   Chiang and Wainwright: Chapters 17 and 18.
II. Stationary Time Series Models: Identification, Estimation and Testing  
   E: Chapter 2  
   A&H: Chapter 13  
   J&D: Chapter 7  
   B: Chapter 6.

**Problem Set 1**
III. Modeling Volatility: ARCH, GARCH, EGARCH and others
   E: Chapter 3
   A&H: 14
   B: Chapter 9

**Problem Set 2**

IV. Models with Trend; unit root tests, etc.
   E: Chapter 4
   A&H: Chapter 16
   J&D: Chapter 7.3
   B: Chapter 8.1-8.3

V. Multi-equation Time Series Models: VAR, SVAR, Impulse Response Functions
   E: Chapter 5
   A&H: Chapter 15
   J&D: Chapter 9.1-9.2
   B: Chapters 7.11-7.17

**Problem Set 3**

VI. Cointegration and Error Correction Models
   E: Chapter 6
   A&H: Chapter 17, 18
   J&D: Chapter 9.3-9.6
   B: Chapter 8.4-8.13

**Problem Set 4 due April 25**

*** Project due Thursday May 2 **

Final Exam
The final exam for this class is the project paper due as noted above.

Course Policies
E-mail:
All students are required to maintain and access their University of Memphis (@memphis.edu) email account. You will receive all official course correspondence at this email account. Any inability to receive incoming mail in a timely fashion (e.g., not regularly checking your email, having a “full mailbox” condition, etc.) is the student’s responsibility.

Attendance:
Attendance is essential and expected.

Academic Integrity:
Academic dishonesty of any sort will not be tolerated. The minimum punishment for academic dishonesty will be an F in the course. The University provides a software package, TurnItIn, which you may use to assess the originality of your work for the project paper. A high “similarity score” is considered plagiarism and will result in an F for the course. Further action
may be taken. Refer to the University of Memphis Code of Student Conduct at http://www.memphis.edu/studentconduct/code.php http://www.memphis.edu/fcbe/integrity/ .

Classroom or Online Behavior:
All participants in the course should be considerate of the other course participants and treat them (as well as their opinions) with respect. The class will operate under the assumption that any and all feedback offered is positive in nature and that the intentions of the person(s) providing feedback are strictly honorable. Insensitivity in this area will not be tolerated. If you have any questions about online communication, you should review the Fogelman College's Netiquette website (opens in new window).

Inclement Weather:
In the event that inclement weather requires the cancellation of classes at The University of Memphis, local radio and television media will be immediately notified. Additionally, The University of Memphis has established an Inclement Weather Hotline at 678-0888 as well as TigerText (opens in new window), an emergency alert text messaging service to students, faculty and staff. This optional service is used in the event of an on-campus emergency, an unscheduled university closing, or a delay or cancellation of classes due to, for instance, inclement weather. Additional information on TigerText (opens in new window).

Student Services:
Please access the FCBE Student Services (opens in new window) page for information about:

- Students with Disabilities
- Tutoring and other Academic Assistance
- Advising Services for Fogelman Students
- Technical Assistance