Econ 9474
Econometric Methods III
Spring 2016

Instructor J. Isaac Miller millerjisaac@missouri.edu
Course MW 2:00-3:15PM Middlebush 208
Office Hours MW 10:00AM-12:00PM Professional 221
Website courses.missouri.edu

Objectives
The objective is to familiarize the student with econometric tools commonly used in
time series analysis. These tools are essential for applied and empirical research in
econometrics, macroeconomics, finance, and other fields. Moreover, they are often starting
points for theoretical inquiry.

Prerequisite: Econ 9473 or instructor's consent.

Grade Composition
HW Assignments ........................................................................................................ 20% of the course grade
Homework assignments will require programming using a statistical package. I will provide
documentation, sample programs, and limited classroom instruction for GAUSS. GAUSS is
available in the computer lab in Middlebush 7. A free student version is available from
http://www.aptech.com/. In recent years, Aptech has provided the full version to students in this
class for free. You may use an alternative software package at your own risk.
I expect you to complete HW assignments on your own with only limited collaboration.

In-Class Midterm Exam .............................................................................................. 20% of the course grade
I will announce the date of the midterm exam in advance.

In-Class Presentation .................................................................................................. 10% of the course grade

Final Exam .................................................................................................................... 50% of the course grade
The final exam will be in Middlebush 208 at 7:30-9:30AM on Wednesday, May 11.

All grades will be assessed using a +/- scale.

Topics Covered:
I. Stationary Series in the Time Domain
   - Preliminaries and Time Domain Analysis
   - Some Limit Theory for Stationary Series
   - Estimation and Forecasting
   - Stationary Vector Autoregression (VAR)
II. Integrated Series
   - Basic Statistical Theory for Integrated Series and Cointegration
   - Testing for Unit Roots
   - Inference from Cointegrating Regressions
   - Systems of Cointegrating Regressions
III. Topics in Time Series
   - Autoregressive Conditional Heteroskedasticity (ARCH) and Variations
   - State Space Models and the Kalman Filter
Recommended Text:

Some Additional Sources:

Statement on Academic Dishonesty:
Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Statement on Disabilities:
If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Disability Center, S5 Memorial Union, 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.

Statement on Intellectual Pluralism:
The University community welcomes intellectual diversity and respects student rights. Students who have questions concerning the quality of instruction in this class may address concerns to either the Departmental Chair or Divisional leader or Director of the Office of Students Rights and Responsibilities (http://osrr.missouri.edu/). All students will have the opportunity to submit an anonymous evaluation of the instructor at the end of the course.

Statement on Academic Inquiry, Course Discussion and Privacy
University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in section 200.015 of the Collected Rules and Regulations. In this class, students may not make audio or video recordings of course activity, except students permitted to record as an accommodation under section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of course activity are subject to discipline in accordance with provisions of section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters. Those students who are permitted to record are not permitted to redistribute audio or video recordings of statements or comments from the course to individuals who are not students in the course without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.