ECON413: Applied Macroeconomics
Mon/Wed/Fri 9:00-9:50, Chancellors 132

CONTACT

Professor Throckmorton
E-mail: nat@wm.edu
Office: Chancellors 246
Office Hours: Tues 9:00-12:00
    or by appointment any afternoon (please e-mail at least one day in advance)

BOOKS

- (Required) Hamilton, J. D. (1994): Time Series Analysis, Princeton, NJ: Princeton University Press.

- (Required) McCandless, George (2008): *The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*. (Cambridge, MA: Harvard University Press)

DESCRIPTION

This course will survey frontier research in macroeconomics, focusing on the applications of both reduced-form and structural dynamic models. Examples include monetary policy, fiscal policy, climate change, and inequality. Background lectures in time series econometrics and structural dynamic modeling will help improve literacy in macroeconomic research, but most of the course is directed by students and their specific macroeconomic interests. Students will have the opportunity to share their interests through discussion, diverse writing assignments, and presentations.

    This course fulfills the COLL 400 capstone experience. As such, it will require you to take initiative in synthesis and critical analysis, to solve problems in applied and academic settings, to create original material or original scholarship, and to communicate effectively with a diversity of audiences. The assignments that satisfy these requirements are listed below.

PREREQUISITES

This course builds on the theory and tools developed in Intermediate Micro/Macro (ECON 303 and 304) and Calculus I (MATH 111 or equivalents).

MATLAB

In addition to theoretical tools, modern macroeconomics often requires extensive computational expertise to solve and estimate models. At several points during the semester, we will use MAT-LAB, which is commonly used by macroeconomists. Throughout the semester, you may want a guide for learning MATLAB so here are a few options:

- Miranda, Mario J. and Paul L. Fackler (2002): *Applied Computational Economics and Finance*. (Cambridge, MA: The MIT Press)
- Gilat, Amos (2010): *MATLAB: An Introduction with Applications*, 4th ed. (Hoboken, NJ: John Wiley & Sons)
- Pratap, Rudra (2009): *Getting Started with MATLAB: A Quick Introduction for Scientists and Engineers*. (New York, NY: Oxford University Press)

There are also countless forums (e.g., MathWorks or Stack Exchange) and publicly available MAT-LAB scripts (including my own).

ASSIGNMENTS

- In total, there are 2 problem sets on theory and application, making up 20% of your course grade.

- There are 5 writing assignments worth 55% of the course grade.

  1. There is a brainstorming session (10%),
  2. a non-technical article (e.g., The Economist) intended for a disparate audience (10%),
  3. a technical literature review and one-page research proposal (10%),
  4. a mock referee report on a working paper (10%),
  5. and a final paper with original material (15%).

  The main goal is to build up to the final paper gradually in a manageable way where rewriting is an important part of the process. Ideally, the writing assignments after the brainstorming session will all revolve around the same research question.

- There are 2 presentations worth 25% of the course grade.

  1. You will motivate and present the findings of a published paper (10%)
  2. and present your final paper as a work in progress (15%).

All assignments must be typeset in LaTeX, and some of the assignments will require MATLAB. All assignments must be turned in on time. Late work is *not* accepted.

GRADES

The classes will be a mixture of lecture, discussion, presentations, and data/`MATLAB` demonstrations. The grading scheme follows:

Activity	Points	Percent
Problem Sets (2)	200	20%
Writing Assignments (5)	550	55%
Presentations (2)	250	25%

There are 1000 possible points in this class. You can miss the next highest grade by a single point. If you want to appeal any grading, please contact me no later than one week from the date I post your score. The following table indicates the minimum number of points needed to guarantee a certain grade.

Grade	Minimum Points	%	Grade	Minimum Points	%
A	920	92	C	700	70
A-	880	88	C-	670	67
B+	850	85	D+	640	64
B	800	80	D	580	58
B-	770	77	D-	550	55
C+	740	74	F	<550	<55

ATTENDANCE

I expect you to attend all classes and submit all assignments. If you are unable to attend class or submit an assignment, please let me know as soon as you can. (You do not need to explain why unless you want to.) If you are unable to attend class, I will send a zoom link shortly before class and you may attend remotely if you are able. I will not record classes. In some cases, I will upload slides or take pictures of anything I write on the whiteboard. In other cases, you will need to obtain notes from a classmate. If I am unable to attend, I will teach remotely via zoom. If I am unable to teach remotely, I will try to find a substitute teacher, otherwise class may be cancelled.

STUDENT ACCESSIBILITY SERVICES

William & Mary accommodates students with disabilities in accordance with federal laws and university policy. Any student who feels they may need an accommodation based on the impact of a learning, psychiatric, physical, or chronic health diagnosis should contact Student Accessibility Services staff at 757-221-2512 or at sas@wm.edu to determine if accommodations are warranted and to obtain an official letter of accommodation. For more information, please see www.wm.edu/sas.

HONOR CODE

I expect everyone to follow the Honor Code. Please see your student handbook for details. "As a member of the William and Mary community, I pledge on my honor not to lie, cheat, or steal, either in my academic or personal life. I understand that such acts violate the Honor Code and undermine the community of trust, of which we are all stewards." Financial and economic crises are precipitated by breeches of trust, so you must understand this is not only very important to me but also to our entire society. I will not hesitate to punish violators of the Honor Code.

MENTAL AND PHYSICAL WELL-BEING

I recognize that students juggle different responsibilities and can face challenges that make learning difficult. There are many resources available at W&M to help you navigate emotional/psychological, physical/medical, material/accessibility concerns, including

- The W&M Counseling Center, 757-221-3620 (services are free and confidential)

- The W&M Health Center, 757-221-4386

- For additional support, contact the Dean of Students, 757-221-2510

- For additional resources, visit https://www.wm.edu/offices/wellness/resources/.

IMPORTANT DATES

Date(s)	Event
Sep 4	No classes (Labor Day)
Sep 11	Add/drop deadline
Oct 9 – 29	Midterm grading period
Oct 12-15	No classes (Fall Break)
Oct 30	Withdraw deadline
Nov 7	No classes (Election Day)
Nov 20-21	Remote classes (Thanksgiving Break)
Dec 12, noon	Final paper due

TENTATIVE COURSE OUTLINE

1. Part 1: Reduced-form dynamic models

   (a) Hamilton Ch. 1: Difference Equations

   (b) Hamilton Ch. 3.4: Autoregressive Processes

   (c) Hamilton Ch. 11: Vector Autoregressions

   (d) My notes: VAR with Cholesky Decomposition identification

   (e) Christiano et al. (JPE, 2005), "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy"

   (f) Blanchard and Perotti (QJE, 2002), "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending"

2. Part 2: Structural dynamic models

   (a) McCandless Ch. 3: Basic Dynamic General Equilibrium Model

   (b) McCandless Ch. 4: Recursive Deterministic Models

   (c) McCandless Ch. 5: Recursive Stochastic Models