

Department of Economics
University of Toronto

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ECONOMICS 416S/2505
MACROECONOMETRIC MODELS AND FORECASTING

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Grading: First Research Paper (40%) (Due March 7, at start of class)
Second Research Paper (60%) (Due end of term)

Materials: No textbook is required. Students will require a copy of a readings package for a flat charge of \$30.00 (includes tax). I will have some available in class and further copies can be obtained with advance notice from Scholar House on Harbord. Students will also require a copy of the FOCUS model manual. To reduce costs to students, this will be posted on Blackboard in .pdf format. Students may then choose to print any parts they deem useful, or simply view the manual onscreen.

Outline: The course will examine the use of large-scale macroeconomic models for policy analysis and forecasting. Note that emphasis will be on the structure and use of macroeconomic models for all purposes, not simply for forecasting, and that relatively little attention will be paid to alternative forecasting methods. Note also that emphasis will be placed on practical problems and applications, recognizing that many students will eventually have to deal with models of this type (or their by-products) in the real world.

For the first research paper, individual students will conduct relatively simple policy experiments with the FOCUS model under a range of assumptions about policy or behavioural response. The student will then write up and attempt to 'unpack' the results - explaining what happened based on the model's structure. If the paper is submitted on time, the grade will be available by the course drop date.

For the second research paper, individuals or teams of 2-4 students each will undertake improvements or extensions of the U of T models, or will apply the models to a problem of policy or impact analysis or will develop an alternative medium-term projection. While hands-on papers are generally to be preferred, occasionally I will permit individuals to undertake a literature-only second research paper - e.g., a survey of macro-modelling work for a particular country or of advanced econometric methods in macro-modelling. Research topics will be hammered out around the middle of the term and a general suggestions list will be circulated.

- Tentative List of Topics:
- Introduction to macro models and their applications and critics - (2 weeks)
 - Detailed examination of the FOCUS model and its operation (3-4 weeks)
 - Case Studies of Applications: (1-2 weeks)
 - modelling the impacts of tax reform or other policy changes
 - modelling the impact of a federal budget
 - Using FOCUS for a medium-term projection (forecasting) exercise (2 -3 weeks)
 - inputs - judgmental adjustments - critical appraisal
 - Evaluating and comparing models and forecasts (1 week)
 - Alternative forecasting methods (0.5 week)
 - Frontiers of model development: expectations, econometric methods, advanced model testing and comparison, etc. (1 week)
 - Close Relations: DSGE, Computable General Equilibrium Models; Input-Output Models (1 week)

- Reading for Weeks 1-2
- Jump, Dungan and Murphy "The FOCUS Model - an Overview" - Introduction to FOCUS Manual
 - Fair, Ray C. *Specification, Estimation and Analysis of Macroeconometric Models*, (Harvard University Press, 1984.) (Chap. 2) (Reading #1)
 - 'Dynamic Multipliers' - (Reading #2)
 - Lang, Richard W. "Using Econometric Models to Make Economic Policy", *Bulletin of the Federal Reserve Bank of Philadelphia*, January-February, 1983. (Reading #3)