

## **Ph.D. Program Seminar Course**

### **A New Comparative Approach to Macroeconomic Modeling**

#### **Course Description:**

The purpose of this seminar course is to give advanced doctoral students a hands-on introduction to frontier research in empirical macroeconomics and the development and application of structural macroeconomic models. The course will consist of a combination of lectures, supervision of modeling projects, student presentations and group discussions with extensive feedback. Each project, which should be pursued by a single student or a team of two students, will involve studying an existing macroeconomic model from the literature. Students will then be advised on the development of a software implementation of the model in DYNARE with a policy application. At the end of the course, students should be able to start working on a dissertation project that involves structural macroeconomic modeling. The course can be counted as a seminar course in the field macroeconomics of the Ph.D. Program. Successful participation in this seminar course is a precondition for the supervision of a Dissertation at the Chair.

#### **Course Time and Location:**

We will be meeting repeatedly throughout the semester for lectures and student presentations in the House of Finance. The introductory meeting will take place on Monday, October 21, at 3 pm in Room Toronto (HoF 3.68).

#### **Course Registration:**

To register for the course, students should send an e-mail to Elena Afanasyeva, [eafanasyeva@wiwi.uni-frankfurt.de](mailto:eafanasyeva@wiwi.uni-frankfurt.de). The e-mail should contain the participant's name and contact details. Registration should take place as soon as possible. The maximum number of students participating in the course for credit will need to be restricted to twelve.

#### **Course Requirements:**

Students will be expected to give two short presentations for group feedback. The first presentation will discuss the assigned paper from the literature and modeling project. It will take place in the middle of the semester. The second presentation will report on the implemented model and policy application. Grading for the seminar course will be based on presentations and model implementation.

## Literature

The comparative approach is described in detail in:

Wieland, Volker, Tobias Cwik, Gernot J. Müller, Sebastian Schmidt, and Maik Wolters (2012). „A New Comparative Approach to Macroeconomic Modeling and Policy Analysis,” *Journal of Economic Behavior and Organisation*, Elsevier, Vol. 83, Issue 3: 523-541, also available at <http://www.macromodelbase.com>.

This paper is required reading for all students.

Student projects will focus on studying and later implementing one of the models described in the following papers. Project with medium- to large-scale models may be pursued by teams of two students.

### 1) Banks and Macroprudential Policies

Dib, Ali (2010). “Banks, Credit Market Frictions, and Business Cycles,” Bank of Canada Working paper No. 2010-24.

Christensen, Ian, Cesaire Meh and Kevin Moran (2011). “Bank Leverage Regulation and Macroeconomic Dynamics,” Bank of Canada Working Paper 2011-32.

Brzoza-Brzezina, Michal and Krzysztof Makarski (2011). "Credit Crunch in a Small Open Economy," *Journal of International Money and Finance* 30: 1406-1428.

Unsal, Filiz D. (2013). “Capital Flows and Financial Stability: Monetary Policy and Macroprudential Responses,” *International Journal of Central Banking* 9(1): 233 – 286.

Bailliu, Jeannine, Cesaire Meh and Yahong Zhang (2012). “Macroprudential Rules and Monetary Policy when Financial Frictions Matter,” Bank of Canada WP 2012-6.

Lima, Levine, Pearlman, Yang (2012). “Optimal Macro-Prudential and Monetary Policy,” working paper.

### 2) Unconventional Monetary Policy

Curdia, Vasco and Michael Woodford (2009). "Credit Frictions and Optimal Monetary Policy," manuscript.

### 3) Projection Models

Carabenciov, Ioan, Charles Freedman, Roberto Garcia-Santos, Douglas Laxton, Ondra Kamenik, Petar Manchev (2013). “GPM6 - The Global Projection Model with 6 Regions,” IMF Working Paper 13/87.

Students may propose an alternative model in any of these areas for a project. It will be approved if the model is sufficiently interesting and implementable within such a project.

## **Course Schedule:**

### October 21, 15:00-16:00

1<sup>st</sup> meeting to discuss course plan and potential projects. Students may state preferences for projects and assignments can be made.

### October, 28

Last day for signing up for a particular project. Availability to be cleared with Elena Afanasyeva.

### November, 21-25

November 21 (10-12pm, HoF 3.68) Lecture on Macroeconomic Modeling I (Prof. Wieland)

November 22 (8-10am, HoF 3.68) Lecture on Macroeconomic Modeling II (Afanasyeva)

November 25 (12-14pm, HoF 3.68) Introduction to Dynare and Macro Model Data Base. Computer Session (Macro Model Base Team)

### January, 21/22 (TBC)

Student presentations explaining the model and paper chosen for the project. Time: 30 minutes for each presentation including discussion.

### February, 10/11 (TBC)

Student presentations of model implementation. Proof of replication and comparisons to other models available in Wieland et al. (2012). Time: 35 minutes for each presentation including discussion.

### March 12

Last day for turning in the write-up describing model implementation (equations, data etc.), replication and comparison exercises.