THE GRADUATE INSTITUTE GENEVA

INSTITUT DE HAUTES ÉTUDES INTERNATIONALES ET DU DÉVELOPPEMENT
GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES

International Economics
Development Economics

Academic year 2021-2022

Advanced International Macroeconomics A: Methods and Models

EI082 - Autumn - 3 ECTS

Friday 14h15 - 18h00

Course Description

This course provides a graduate-level treatment of the international macroeconomics of trade and financial linkages. The course is divided in two parts, which will proceed simultaneously. In the first part, we will study the workhorse models and their solution methods. Topics covered include: discrete-time linear models; continuous-time linear models; higher-order perturbation methods; global solution methods; models with occasionally binding constraints. In the second part, we will study how these methods are used in various subfields of international macroeconomics. Sample topics are: international risk sharing; trade-macro linkages; sovereign debt and default; emerging market business cycles; exchange rate puzzels; capital flows.

PROFESSOR

Paolo Cavallino

Office hours

ASSISTANT

Viktoria Vidahazy

Office hours

Syllabus

EI082 is the first part of the course. It provides an overview of the basic dynamic models of international macroeconomics and their solution methods. We will study and solve the classical small open economy real business cycle model, the New Keynesian model, and the two-country model. We will study and use different solution methods including first and second order perturbation methods, and global solution methods. The goal is to learn the basic tools that are necessary to understand and replicate existing papers in the field of international macroeconomics, and eventually write original ones.

The lectures will be mostly taught using slides and examples of codes. Slides, codes and, possibly, digital white boards will be shared with you after the class.

Prerequisites: Masters Macroeconomics sequence at IHEID or its equivalent at other institutions. Masters level knowledge of multivariate calculus, linear algebra, and probability is required. Prior knowledge of a programming language will be useful but not necessary for picking up Matlab and Dynare.

Course materials: There is no text book for the course, but we will be using a number of references which will be mentioned before each lecture.

Software: We will be using Matlab and Dynare, which are software packages for solving and simulating dynamic models. If you have never used them before these are two free references to get started:

- Matlab Primer (Sigmon) (http://www.math.ucsd.edu/~bdriver/21d-s99/matlab-primer.html)
- Dynare User Guide (Mancini Griffoli) (http://www.sfu.ca/~kkasa/UserGuide)

Grades: The final grades of the courses EI082 and EI083 will be the weighted average of three components: two or three graded homework assignments (50%); one presentation and one referee reports, or two presentations, (30%); class participation (20%). More details will be provided during the first lecture.

Course schedule: Below is a tentative course schedule for both EI082 and EI083. I might revise it before and/or during the course to include or exclude topics depending on our pace and the background of the students enrolled.

Date	Topics
Class 1	
October 1st	Math review; The discrete-time SOE-RBC model: decentralized equilibrium, log-linearization and equilibrium dynamics.
Class 2	
October 1st	The SOE-RBC model: calibration and numerical solution (introduction to Dynare), data and performance of the model.
Class 3	
October 15th	Math review; The continuous-time SOE-NK model: decentralized equilibrium, log-linearization, welfare analysis.
Class 4	
October 15th	Presentations
Class 5	
October 29th	The two-country model: macroeconomic interdependence, international risk-sharing, portfolio determination.
Class 6	
October 29th	Presentations
Class 7	
November 12th	Dynamic programming; Global solution methods: value function iteration, policy function iteration.
Class 8	
November 12th	Presentations
Class 9	
November 26th	Global solution methods: Euler equation iteration, collocation methods.
Class 10	
November 26th	Presentations
Class 11	
December 10th	Models with occasionally binding constraints, Markov-switching models.
Class 12	

December 10th	Presentations
Class 13	
December 17th	Presentations
Class 14	
December 17th	Presentations