OVERVIEW
This four-day course is designed to familiarize economists with recent advances in the study of monetary and fiscal policy in the presence of heterogeneity. It is designed for researchers in central banks and other government and non-government agencies who wish to improve their understanding of state-of-the-art tools for incorporating income and wealth distributions into macroeconomic models, and the main policy lessons that have emerged from these models.

A growing literature argues that Heterogeneous Agent New Keynesian (HANK) models offer a useful framework for the analysis of macroeconomic shocks and policies. Advantages over traditional Representative Agent New Keynesian (RANK) models include the ability to study:

• new transmission mechanisms for monetary policy
• the impacts of monetary and fiscal policy on wealth and income distributions
• the conduct of policy in the presence of shocks that cannot be studied in the absence of heterogeneity

Many central banks have access to (or collect themselves) high-quality micro data on household and firm behavior. HANK models also open up the door to bringing this micro data to the table in order to empirically discipline macro theories.

TOPICS INCLUDE

• General equilibrium Heterogeneous Agent models with incomplete markets and uninsured idiosyncratic labor income risk
• Computational tools for heterogeneous agent models in discrete and continuous time
• Heterogeneous Agent models with sticky prices (HANK models)
• Monetary Policy in HANK: interest rates rules, forward guidance, quantitative easing
• Fiscal Policy in HANK: marginal propensities to consume, hand-to-mouth households
• Computational tools for heterogeneous agent models with aggregate shocks
• Bayesian estimation of HANK models (time permitting)

ABOUT THE INSTRUCTORS

**Greg Kaplan**
Greg Kaplan is Professor of Economics at the University of Chicago. His research spans macroeconomics, labor economics and applied microeconomics, with a focus on the distributional consequences of economic policies and economic forces. He has published extensively on the topics of inequality, risk sharing, unemployment, household formation, migration, fiscal policy and monetary policy. Greg was previously Professor and Assistant Professor in the Department of Economics at Princeton University, Assistant Professor in the Department of Economics at the University of Pennsylvania and an Economist in the Research Department of the Federal Reserve Bank of Minneapolis. He has been a consultant at the Federal Reserve Bank of Philadelphia and the Federal Reserve Bank of Chicago, and has had a visiting position at the Reserve Bank of Australia. He is an Editor at the Journal of Political Economy, a Research Associate at the National Bureau of Economic Research and a Research Fellow at the Institute for Fiscal Studies.

**Benjamin Moll**
Benjamin Moll is Professor of Economics and International affairs, as well the Cyril E. Black University Preceptor at Princeton University. He is also a faculty research fellow of the National Bureau of Economics and a research affiliate at the Centre for Economic Policy Research. He has had visiting appointments in the Department of Economics at Harvard, New York University and Stanford. He is an editor at the American Economic Journal: Macroeconomics. Moll’s current research explores the role of income and wealth distribution in the macroeconomy. One line of this work is concerned with the causes of inequality, in particular understanding what drove the rise in income and wealth inequality at the very top of the distribution observed in the US over the past forty years. A second line of this work examines how the presence of inequality affects how economists should think about macroeconomic policy.
LOGISTICS

Class Format
The class size will be intentionally limited to 20 people in order to maximize the experience of participants. Classes will consist of lectures by Professor Greg Kaplan (University of Chicago) and Professor Benjamin Moll (Princeton University) plus practical tutorial sessions. The lectures will be intimate and interactive, with ample opportunity for questions and discussion. There will also be substantial time to talk and interact with Professors Kaplan and Moll.

Fee
The $6,000 fee (payable in US dollars) includes tuition, course materials, accommodations, coffee breaks, meals, and social programs. Enrollment is confirmed upon receipt of full payment. Cancellations made before May 1, 2019, are subject to a 25 percent fee. Cancellations made after May 1, 2019, are subject to the total charge.

Travel Days
Participants should plan to arrive on Sunday, Aug. 4, to attend an opening reception and dinner, and depart on Thursday, Aug. 8, after the day’s last session. Dinners with either Professor Kaplan or Professor Moll will be held on Monday, Tuesday, and Wednesday evenings.

Accommodations
As part of tuition, accommodations will be provided at the new Sophy Hotel in Hyde Park, conveniently located near the University of Chicago.

Participants
This master class is suitable for PhD economists who desire to learn more about Heterogeneous Agent (HA) macroeconomics and Heterogeneous Agent New Keynesian (HANK) models. It is particularly tailored to economists at policy institutions such as the Federal Reserve System, the US Department of Treasury, and the Joint Committee on Taxation.

Examples of prospective participants include:
(1) Economists who are already familiar with RA New Keynesian economics and want to understand how the framework is altered in the presence of household heterogeneity

(2) Economists who are familiar with textbook HA models and want to understand how to incorporate nominal rigidities into this framework

(3) Economists who may or may not be familiar with HA models and want to learn about state-of-the-art computational techniques for solving the models

(4) Economists and policymakers who have heard about HANK models and just want to know what all the fuss is about: What are the lessons for monetary and fiscal policy? How does inequality affect monetary policy and vice-versa?

Preparation
Familiarity with macroeconomic tools and methods at the level of a 1st-year PhD course is expected. This includes, in particular, basic recursive methods (Bellman equations) as well as linearization of rational expectation models. Prior to the Master Class, we will send a list of suggested readings. We will also suggest preliminary material to study for registered participants based on their stated backgrounds.