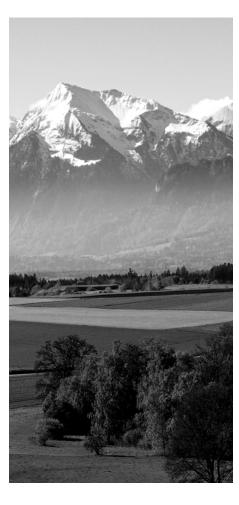


# SWISS PROGRAM FOR BEGINNING DOCTORAL STUDENTS IN ECONOMICS 2022







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## INTRODUCTION

The Study Center Gerzensee, Foundation of the Swiss National Bank, opened its doors in 1986 to serve as an international training and conference center for economists and central bank staff. Based at an old manor in the heart of Switzerland, the Center features state-of-the-art seminar rooms as well as a fully equipped hotel, restaurant, and sports facilities. High-ranking members of the Swiss National Bank, the Swiss government, and the academic and business communities serve on the Center's Foundation Council and the Advisory Committee for Education and Training. Academics actively engaged in research direct the Center and manage its programs. The faculty is composed of the Center's own staff, leading scholars from around the world, and specialists from the Swiss National Bank and other partner institutions.

Over the last decades, doctoral students in economics from all Swiss universities and some foreign institutions have participated in the Study Center's Swiss Program for Beginning Doctoral Students in Economics. The program sequences in microeconomics, macroeconomics, and econometrics cover the material of a US-style first-year PhD program. They target excellent beginning doctoral students who seek a broad and thorough training in economics to understand and conduct first-rate academic research.

In 2022–2023, the Study Center is offering another instance of the Swiss Program for Beginning Doctoral Students in Economics. This brochure lays out the program, introducing the course contents and lecturers. It also provides information on funding, organization, and admission.

I hope you will find the program attractive. At the Study Center, we are looking forward to welcoming curious and ambitious course participants to Gerzensee.

> Dirk Niepelt Director

## **PROGRAM**

Introduction Day, August 15, 2022 Math course, August 15–18, 2022 Econometrics 1, August 22–26, 2022 Microeconomics 1, September 19–23, 2022 Econometrics 2, October 17-21, 2022 Microeconomics 2, November 14–18, 2022 Macroeconomics 1, December 12–16, 2022 Macroeconomics 2, January 16–20, 2023 Exam Session I, February 27–March 1, 2023 Econometrics 3, March 13-17, 2023 Macroeconomics 3, March 27–31, 2023 Macroeconomics 4, May 8–12, 2023 Econometrics 4, May 22–26, 2023 Microeconomics 3, June 12–16, 2023 Microeconomics 4, June 26–30, 2023 Exam August 30-September 1, 2023

The program consists of an optional mathematics review as well as sequences in microeconomics, macroeconomics, and econometrics. In each sequence, leading international academics teach four week-long courses.

A typical course day includes classroom lectures of three hours as well as exercise review sessions. Course weeks start on Monday at 10:30 a.m. and end on Friday at noon.

In the periods between the course weeks, participants review and prepare the material covered in class, solve mandatory takehome problem sets, and study for the exams.

On successful completion of the program, participants are awarded a certificate. It is the responsibility of participants to obtain credit with their universities.

# **SEQUENCES**

#### Microeconomics

The Microeconomics sequence covers: Preference and choice, consumer choice, classical demand theory, aggregate demand, production, choice under uncertainty; markets and competitive equilibria, welfare properties and other properties of competitive equilibria, uncertainty and asset pricing; non-cooperative games, simultaneous move and dynamic games, complete and incomplete information games with applications; externalities, public goods, adverse selection, signalling, screening, principal-agent theory, limits to redistribution, general equilibrium under uncertainty, social choice, incentives and mechanism design.

Textbooks used in the sequence include Gibbons (1992), A Primer in Game Theory, Harvester Wheatsheaf; Mas-Colell, Whinston and Green (1995), Microeconomic Theory, Oxford University Press.Other references are Jehle and Reny (2011), Advanced Microeconomic Theory, Prentice Hall, and Varian (1992), Microeconomic Analysis, Norton.

#### Macroeconomics

The Macroeconomics sequence covers: Development accounting and misallocation, capital accumulation, optimal consumption and saving, complete and incomplete markets, aggregation, risk sharing, asset pricing, durable goods and the demand for housing; the neoclassical growth model, Ramsey policies with complete and incomplete markets, the McCall and Stigler search model, search and matching, Diamond-Mortensen-Pissarides; the classical monetary model and the basic New Keynesian model, inflation dynamics, optimal monetary policy design; models of multiple equilibria, small open economies, overlapping generations, and economic growth.

Textbooks used in the sequence include Acemoglu (2009), Introduction to Modern Economic Growth, Princeton University Press; Barro and Sala-i-Martin (2003), Economic Growth, MIT Press; Galí (2015), Monetary Policy, Inflation and the Business Cycle. An Introduction to the New Keynesian Framework, Princeton University Press; Ljungqvist and Sargent (2018), Recursive Macroeconomic Theory, MIT Press; Niepelt (2019), Macroeconomic Analysis, MIT Press; Romer (2019), Advanced Macroeconomics, McGraw-Hill: Walsh (2017), Monetary Theory and Policy, MIT Press, and Woodford (2003), Interest and Prices: Foundations of a Theory of Monetary Policy, Princeton University Press.

#### **Econometrics**

The Econometrics sequence covers: Basic probability theory, large sample theory, estimators and their properties, hypothesis testing, Bayes methods; inference in the classical regression model, generalizations of the linear model, instrumental variables; linear difference equations, stochastic processes, Wold theorem, spectral analysis, estimation and inference methods for stationary linear models, vector autoregressions, functional central limit theorem, Kalman filtering, models of time-varying volatility, forecast-

ing; nonlinear regression and non-linear GMM estimation, quantile regression, discrete choice models, program evaluation and sample selection, non-parametric estimation techniques, and panel data models.

Textbooks used in the sequence include Hamilton (1994), *Time Series Analysis*, Princeton University Press; Hayashi (2000), *Econometrics*, Princeton University Press, and Hogg and Craig (1995), *Introduction to Mathematical Statistics*, Prentice Hall.

## **LECTURERS**

## Fernando Álvarez University of Chicago

Fernando Alvarez is the Inaugural Saieh Family Professor in Economics and the College at the University of Chicago. He holds a PhD from the University of Minnesota. He is a member of the American Academy of Arts and Sciences, a research associate at the National Bureau of Economic Research (NBER), a fellow of the Econometric Society. He has served as editor of the Journal of Political Economy, and an associate editor at other

journals. Professor Álvarez has received fellowships from the European Central Bank (ECB), the Alfred P. Sloan Foundation and the Organization of American States. His research interests include monetary and employment policy, comprising discussions of interest and exchange rates, unemployment and insurance claims, equilibrium economics, dynamic programming, and segmented markets.

## Jordi Galí Universitat Pompeu Fabra and CREI

Jordi Galí is professor at Universitat Pompeu Fabra (UPF) and senior researcher at the Center for Research in International Economics (CREI) and research professor at the Barcelona GSE. He earned his PhD in economics at the Massachusetts Institute of Technology (MIT). He was the director of CREI between 2001 and 2017. He has held academic positions at New York University and Columbia University. He has been a visiting professor at MIT. He is a research fellow at the Center for Economic Policy Research (CEPR), a research associate at the NBER, and a fellow of the Econometric Society. He has served as a co-editor of the Journal of the European

Economic Association and co-director of the CEPR International Macroeconomics Programme. In 2012 he served as president of the European Economic Association. Among other awards, Galí has received the National Research Prize from the Government of Catalonia and was co-recipient of the Yrjö Jahnsson Award. He has been a consultant to the ECB, Federal Reserve, Sveriges Riksbank, Norges Bank, Banque de France, and other central banks. His research interests include macroeconomics and monetary theory, and he has published articles on these topics in numerous scientific journals.

# Piero Gottardi University of Essex

Piero Gottardi is professor of economics at the University of Essex. He received his PhD from the University of Cambridge and was previously professor of economics at the University of Venice and the European University Institute, and a visiting professor at Harvard, Yale, Brown and UPF. He is associate editor of the Journal of Economic Theory and the Journal of Public Economic Theory. His research interests are in general equilibrium theory, financial economics and macroeconomic theory.

## Bo E. Honoré Princeton University

Bo Honoré is Class of 1913 Professor of Political Economy; professor of economics at Princeton University. He conducts research in econometrics. Professor Honoré earned his PhD at the University of Chicago. He has taught at Northwestern University and has held visiting positions at the University of Chicago and the University of Copenhagen. Professor Honoré has served as director of graduate studies, director of graduate admissions, director of the Gregory C. Chow Econometric

Research Program, associate chair and chair of the department of economics at Princeton. Bo Honoré is a fellow of the Econometric Society. He was awarded The Richard E. Quandt Teaching Prize in 2012 and 2018, and The Rigmor and Carl Holst-Knudsen Award for Scientific Research from Aarhus University in 2017. He is a past member of the Board of Trustees of the Danish National Research Foundation.

## Johannes Hörner Yale University

Johannes Hörner is the Alfred Cowles Professor of Economics at Yale University. He has received his PhD in economics from the University of Pennsylvania in 2000, and has held previous positions at the Kellogg School of Management, Northwestern

University (2000–2008). His academic interests range from game theory to the theory of industrial organization. His research has focused on repeated games, dynamic games, and auctions.

#### John H. Moore University of Edinburgh and London School of Economics

John H. Moore is professor of economic theory at the University of Edinburgh and at the London School of Economics (LSE). He studied for a BA in mathematics from the University of Cambridge and holds a PhD in economics from the LSE. Professor Moore's research is in microeconomic theory, labor contracts, mechanism design, the theory of the firm, and financial contracting. More

recently, he has worked on the micro foundations of macroeconomics, in particular the role of money and credit in the propagation of business cycles. He was editor of the Review of Economic Studies, elected fellow of the Econometric Society and, with his co-author Nobuhiro Kiyotaki, was awarded the Yrjö Jahnsson Medal.

#### Sergio Rebelo Northwestern University

Sergio Rebelo is professor of international finance at the Kellogg School of Management, where he has served as chair of the finance department. Professor Rebelo does research on macroeconomics and international finance. He has studied the causes of business cycles, the impact of economic policy on economic growth, and the sources of exchange rate fluctuations. His research has been funded by the National Science Foundation, the World Bank, the Sloan Foundation, and the Olin Foundation. He is a fellow of the Econometric Society, the NBER, and the CEPR. He has been a member of the editorial board of various academic journals, including the American Economic Review,

the European Economic Review, the Journal of Monetary Economics, and the Journal of Economic Growth. He has won numerous teaching awards at the Kellogg School of Management, including the Executive Master's Program Outstanding Professor Award and the Professor of the Year Award. Professor Rebelo has served as a consultant to the World Bank, the International Monetary Fund, the Board of Governors of the Federal Reserve System, the ECB, the McKinsey Global Institute, the Global Markets Institute at Goldman Sachs, and other organizations. He received his PhD in economics from the University of Rochester.

#### Ricardo Reis London School of Economics

Ricardo Reis is the A.W. Phillips Professor of Economics at the LSE. He has published widely on macroeconomics. His main areas of research are inflation expectations, unconventional monetary policies and the central bank's balance sheet, disagreement and inattention, business cycle models with

inequality, automatic stabilizers, sovereignbond backed securities, and the role of capital misallocation in the European slump and crisis. Professor Reis received his PhD from Harvard University, and he was previously on the faculty at Columbia University and Princeton University.

## Klaus Schmidt University of Munich

Klaus Schmidt is professor of economics at the University of Munich. He received his PhD from the University of Bonn and was a visiting professor at MIT, Stanford and Yale. He is associate editor of the RAND Journal of Economics and served as a co-editor of the European Economic Review and associate editor of the Review of Economic Studies. His research interests focus on contract theory and game theory, in particular the theory and applications of incomplete and implicit contracts, on behavioral and experimental economics, and on political economy.

# Mark W. Watson Princeton University

Mark W. Watson is professor of economics and public affairs at Princeton University. He is a research associate at the NBER and has served as a consultant for the Federal Reserve Banks of Chicago and Richmond. Before joining the Princeton faculty, he was a professor of economics at Northwestern University. Professor Watson holds a PhD from the University of California, San Diego. He has published extensively in the areas of theoretical and applied econometrics.

#### PROGRAM RULES

#### **PARTICIPATION**

Participants are expected to prioritize the program and behave responsibly. In particular, they must attend all lectures and sessions, submit solutions to problem sets in time, and participate in the exams.

Nonparticipation must be excused in advance. The Study Center reserves the right to request a medical certificate in case of nonparticipation due to medical reasons. Misconduct or violation of rules may trigger

expulsion from the program. No accompanying persons are allowed to stay at the Center during the program.

#### **TAKE-HOME PROBLEM SETS**

Participants must submit solutions to the take-home problem sets latest by the set deadline. In some cases, participants can form groups to jointly submit a solution. The professors determine the maximum group size. Copy-pasted solutions are not accepted. Solutions are graded on a scale from 0 to 100 points and transformed into a grade on a scale from 1 to 6, with 6 being the best grade. Grades may be contested within a month after they have been communicated.

The appeal has to be well motivated and addressed to the Study Center. A problem set may not be retaken.

The total grade for the problem set solutions in each sequence is computed by averaging all grades of the participant's solutions. In case of compelling reasons, grades of not submitted solutions do not count for the average.

**Submission:** Solutions to take-home problem sets must be concise and precise, include

a cover sheet with the name and ID number of the participant (or the names of the participants in the group) and the title of the homework. Solutions must be typewritten and e-mailed in PDF format latest by the dates announced at the Introduction Day. Participants who do not get an acknowledgement of receipt by e-mail latest a working day after the deadline must immediately contact Ms. Teodora Ruiz, or they risk missing the deadline.

#### **EXAMS**

There are two exams for each sequence. The first exam covers the material of weeks 1 and 2. The second exam covers the material of weeks 3 and 4. Exams may be "open book" or "closed book" as determined by the professors. Personal computers may not be used during the exams. Each exam lasts

two hours. Exams are graded on a scale from 1 to 6. The passing grade for an exam is 3.5. Grades may be contested within a month after they have been communicated. The appeal has to be well motivated and addressed to the Study Center. An exam may be retaken once, in the following year

(unless important reasons render a delay unavoidable). Exams are held at the Study Center on the following dates:

Exam Session I (week 1 & week 2): February 27–March 1, 2023 Exam Session II (week 3 & week 4): August 30–September 1

#### **GRADES AND CERTIFICATE**

For each sequence, the overall grade is computed as a weighted average of the grades for the problem set solutions (10%) and the first and second exam (45% each). To pass a sequence, the participant must pass each exam and achieve an overall grade

of at least 4. The Study Center reports the grades for each sequence to the representative of the participant's institution, which in turn decides about the recognition of those grades.

The Study Center awards a certificate to participants who pass all three sequences of the program within one year. On request, the Study Center confirms successful course participation in single sequences.

# FUNDING AND ORGANIZATION

The program is heavily subsidized. The fee for one sequence amounts to CHF 500, the fee for two sequences to CHF 1,000, and the fee for the full program to CHF 2,000 of which CHF 1,000 is refunded if and only if the full program is successfully

completed within one year. The fee covers tuition as well as the cost of a single or shared double room with full board. For information about the hotel services, see the website of the Study Center's hotel.

The restaurant offers meat, fish, and vegetarian meals and caters to special diets.

# **ADMISSION**

The Study Center invites Swiss universities and the Swiss National Bank to nominate candidates. As space is limited, the Center cannot admit all qualified nominees. Repeat nominations are possible.

Candidates affiliated with a Swiss university or the Swiss National Bank should indicate their interest by sending an e-mail to the representative at their home institution listed below. The representative will then initiate a web-based application process, allowing candidates to submit their application online. Unlike in previous years, there is no application form to download from the Study Center's website.

Candidates must hold an undergraduate degree and be enrolled (or about to enroll) in the doctoral program at a Swiss university. They should hold a MA degree or complete their MA studies before the program starts. Under exceptional circumstances, an applicant without a MA degree may be fast tracked into the program. Preference is given to applications for the full program.

A complete application includes (a) completed online application form; (b) statement of purpose (ca. two pages, in English); (c) MA thesis if available (in English or a Swiss national language); (d) most recent grade transcripts; (e) completed online recommendation forms by 1–3 professors, including the prospective advisor; (f) recent GRE general test scores (not older than two years).

For information about the GRE including how and where to take the test, see the website of Educational Testing Service; of most relevance are the scores for the quantitative and verbal reasoning parts. Applicants should have (f) Educational Testing Service send their GRE results to the Study Center directly. The Study Center's GRE Graduate Code is 7381 (Study Center Gerzensee Swiss Program for Beginning Doctoral Students in Economics).

#### Representatives:

EPFL, Ph. Thalmann
ETH Zurich, P. Egger
Swiss National Bank, C. Lenz
The Graduate Institute, C. Tille
University of Basel, Y. Lengwiler
University of Bern, H. Dellas
University of Fribourg, T. Madiès
University of Geneva, A. Tetenov
University of Lausanne, B. Klaus
University of Lucerne, S. Luechinger
University of Neuchâtel, M. Zarin-Nejadan
University of St.Gallen, R. Föllmi
Università della Svizzera italiana, L. Kueng
University of Zurich, R. Weber

#### Deadlines:

Study Center receives GRE scores: **April 15, 2022** 

Applicant submits information online: **April 15, 2022** 

Representatives review applications: April 22, 2022

Study Center communicates admission decision: May, 2022

Participant pays fee: June 30, 2022

# CONTACT

All mail as well as inquiries should be addressed to:

Study Center Gerzensee

Swiss Program for Beginning Doctoral Students in Economics, Ms. Teodora Ruiz, Dorfstrasse 2, CH-3115 Gerzensee, Switzerland Tel: +41 31 780 31 03, e-mail: teodora.ruiz@szgerzensee.ch

# LOCATION



**Study Center Gerzensee** 

Dorfstrasse 2, 3115 Gerzensee, Switzerland