

Spring School Ghana 2025



Funded by:



About the spring school

The two-week spring school takes place from February 24th to March 7th in Accra (Ghana) at the Department of Agricultural Economics and Agribusiness of the University of Ghana. The program focuses on theories and applied simulation models for analyzing agriculture and food systems-related policies in developing economies. The program targets MSc and PhD students in agricultural economics and related fields, early career researchers, and professionals from governmental and non-governmental institutions working in agricultural and food systems, as well as related fields.

Objective

The in-person spring provides a unique opportunity to develop theoretical and practical skills in economic modelling for policy analysis.

Content

In the first week, we will review the foundations of microeconomics and introduce the General Algebraic Modeling System (GAMS) software. GAMS will then be utilized to analyse agricultural policy instruments with partial equilibrium models. The second week covers applications of computable general equilibrium models to assess the economy-wide impacts of agricultural and food policies as well as other external shocks. Each Thursday evening, participants are invited to informal networking and cultural exchange events to explore German culture and learn about research and study opportunities in Germany. Additionally, two public lectures each week will discuss applications of the models introduced to relevant policy questions as well as science's role in policy development.

Application requirements

Participation in the spring school is free of charge. However, participants must organize their accommodation and transportation and bring their laptops. To apply, kindly submit the following

documents via email to the spring school coordinators (fasem@ug.edu.gh and ssghana@hu-berlin.de) by January 31st, 2025:

- Motivation letter (max 1 page) highlighting your background and interest in the spring school
- CV (max 2 pages)
- Proof of registration/enrolment in a Master's or PhD program in agricultural economics and related fields (*for students at universities in Ghana*)
- Institutional support letter (*for participants from governmental institutions, research institutions, non-governmental institutions, etc.*)
- Proof of prior knowledge in microeconomics (e.g., certificate, transcript, etc.)

Selection procedure

The selection procedure comprises a rigorous selection of 30 participants, which consists of a preselection of applicants (by February 4th), an online interview of short-listed applicants (February 7th to 10th), and a final selection of participants (by February 12th).

Teaching team

The spring school is conducted by a teaching team from the International Agricultural Trade (IATD) group at Humboldt-Universität zu Berlin. The team has broad experience in conducting similar trainings in different countries.

Prof. Dr. Harald Grethe

Prof. Dr. Grethe is Professor of International Agricultural Trade and Development at the Humboldt-Universität zu Berlin. His research interests include economic and agricultural development, economy-wide simulation modelling, and the role of agriculture in society at large. From 2012 to 2020, he chaired the Scientific Advisory Board on Agricultural Policy and Food at the Federal Ministry of Food and Agriculture, Germany. He has worked as an expert for various institutions, including the European Commission, OECD, FAO, and the World Bank. Prof. Grethe co-founded and has been heading the Agora-Agriculture think-tank in Berlin since 2022.



Dr. Jonas Luckmann

Dr. Luckmann has been a lecturer and senior research fellow at the International Agricultural Trade and Development Group of the Humboldt-Universität zu Berlin since 2016. He has taught in summer/spring schools on agricultural economics in Bhutan and simulation modelling in Benin, Jordan, Kenya, and Sudan. His research focuses on policy analysis, water and resource management, and climate change, including its regional, distributional, and economy-wide implications. Geographically, his research is centered in Africa and the Middle East. Dr. Luckmann is an associate editor of the journal *Water Economics and Policy*, a 2020-2023 research fellow at the Global Trade Analysis Project (GTAP), and a consultant for various international organizations.



Dr. Zuhail Elnour

Dr. Zuhail Elnour is a Senior Research Fellow in the International Agricultural Trade and Development Group at Humboldt-Universität zu Berlin and a Senior Researcher at the Agricultural Economics and Policy Research Center of Agricultural Research Corporation in Sudan. With extensive experience in consultancy for international organizations, such as the World Bank and the International Food Policy Research Institute, she specializes in development and public economics, focusing on poverty alleviation and sustainable development in low- and middle-income countries. Her current work involves using and developing economy-wide simulation modelling to analyze climate change impacts on human health in Sub-Saharan Africa. She has a strong background in teaching simulation modelling at the master's level in Germany and conducting capacity-building workshops on the same subject in Sudan, Benin, Kenya, and Jordan.



Dr. Agossoussi Thierry Kinkpe

Dr. Thierry Kinkpe is a lecturer and senior research fellow at the International Agricultural Trade and Development Group of the Humboldt-Universität zu Berlin. He has broad experience in using and developing general equilibrium models. Dr. Kinkpe has several years of experience in teaching economics (micro and macro as well as rural development economics) and simulation modelling at the Bachelor (in French), Master (in English and French), and PhD (in English) levels. He has taught in summer/spring schools on simulation modelling for agricultural development and policy options to that end and climate change impacts in Benin, Jordan, and Kenya. In recent years, his research focused on the economy-wide implications of developing the processing of agricultural products. Geographically, his research focuses on Agriculture-based economies, mostly in Africa. He has been a consultant for several international organizations.



Sawsan Abdul-Jalil

Sawsan Abdul-Jalil is a doctoral researcher at the International Agricultural Trade and Development Group at the Humboldt-Universität zu Berlin. Her research focuses on integrating ecosystem services in economy-wide simulation models in Jordan. She has worked as a consultant for several governmental and international organizations, including the World Bank. She has experience teaching economics and simulation modelling at the Master's level in English and Arabic.



Martial Houessou

Martial Houessou is a doctoral researcher at the International Agricultural Trade and Development Group at the Humboldt-Universität zu Berlin. His research uses economic modeling to examine the economy-wide impacts of climate change-induced heat stress in Burkina Faso. His experience includes leading monitoring and evaluation (M&E) for significant development projects like the ECOWAS Rice Observatory and the MOVE Competitive Africa Rice Initiative, which focuses on West Africa. He has also taught simulation modelling at the Master's level in English.



Hedvig Lagercrantz

Hedvig Lagercrantz is a doctoral researcher at the International Agricultural Trade and Development Group at Humboldt-Universität zu Berlin. Her research focuses on changing labour structures in the Ghanaian cocoa sector. With an academic foundation in Economic Development (MA) and Peace and Development Studies (BA), she has cultivated a deep interest in labour-related issues across Africa. Hedvig has conducted three research projects in sub-Saharan Africa: an analysis of the impact of the mining industry in South Africa, and two studies on agricultural labour in the cassava and cocoa industry in Ghana. She also brings seven years of experience in student mentoring, reflecting her dedication to academic development and guidance.



Peter Mwangi

Peter Mwangi is a doctoral researcher at the International Agricultural Trade and Development Group at the Humboldt-Universität zu Berlin. His research uses economic modelling to focus on the economy-wide impacts of climate change through agricultural yield changes in Kenya. Previously, Peter Mwangi worked as an Economist and Project Officer for organizations such as the Ministry of Environment and Forestry, Low Emission and Climate Resilient Development Project, and the Forestry and Research Institute in Kenya. He has experience teaching simulation modelling at the Master's level in English.



Location

The workshops will take place on the campus of the Agricultural Economics and Agribusiness Department at the University of Ghana in Legon, Accra, Ghana.

Program Overview

Week 1 **Foundations and Theories of Policy Analysis and Simulation Modelling, Introduction to GAMS**

Date **24/02/2025 – 28/02/2025**

No	Date	Day	Time	Theme and teaching objective
1	24/02/2025	Monday	08:30 – 10:00	Welcome and introduction: course structure and content
			10:30 – 12:30	Introduction to policy analysis
			14:00 – 15:30	Methods of policy analysis
			16:00 – 17:30	Microeconomic foundations of demand and supply systems
2	25/02/2025	Tuesday	08:30 – 10:00	Market equilibrium
			10:30 – 12:30	Elasticities of demand and supply
			14:00 – 15:30	Welfare economics and the efficiency of markets
			16:00 – 17:30	Policy instruments for adaptation to and mitigation of climate change
3	26/02/2025	Wednesday	09:00 – 11:00	Public lecture (1): Can scientific policy advice contribute to practical agricultural and food policy design? Experiences from Germany
			13:00 – 14:30	PC-LAB: A grain market model in Excel
			15:00 – 16:00	Introduction to GAMS
			16:30 – 17:30	Introduction to policy simulation modelling
4	27/02/2025	Thursday	09:00 – 11:00	Public lecture (2): Analyzing the Potential of Cashew By-product Processing in Creating a More Sustainable Agri-Food System: A CGE Analysis on Benin
			11:30 – 12:30	PC-LAB: A grain market model in GAMS
			14:00 – 15:30	PC-LAB: Improving the efficiency of the model
			16:00 – 17:30	PC-LAB: Subsidies and welfare analysis
			18:00 – 19:30	Evening event: German culture, food and cuisine
5	28/02/2025	Friday	08:30 – 10:30	PC-LAB: Multiregional model and data input/export from Excel
			11:00 – 12:30	Interpretation and discussion of the model results
			14:00 – 15:30	Limitations of PE models and overview of available PE models
			16:00 – 17:00	Evaluation of Week 1

Week 2 Quantitative Analysis of Agricultural and Food Policies in General Equilibrium Models

Date 05/03/2025 – 07/03/2025

No	Date	Day	Time	Theme and teaching objective
6	03/03/2025	Monday	08:30 – 10:30	Introduction to Social Accounting Matrices
			10:30 – 12:30	PC-LAB: social accounting matrix analysis
			14:00 – 15:30	Introduction to CGE modelling
			16:00 – 17:30	Prices and accounting identities in CGE modelling
7	04/03/2025	Tuesday	09:00 – 11:00	Public lecture (3): Economy-wide impacts of irrigation expansion - A case study on Kenya and Benin
			11:30 – 12:30	A basic 2-sector CGE model
			14:00 – 15:30	PC-LAB: Policy experiments in a basic 2-sector CGE model
			16:00 – 17:30	Interpretation and discussion of the model results
8	05/03/2025	Wednesday	09:00 – 11:00	Public lecture (4): Economy-wide impacts of climate change on economies of the Global South
			13:30 – 13:30	Extension of the basic 2-sector CGE model
			14:00 – 15:30	- Model setup and calibration - Market clearing and macroeconomic closures in CGE
			16:00 – 17:30	PC-LAB: Policy experiments in an extended basic 2-sector CGE model
9	06/03/2025	Thursday	08:30 – 09:30	Open economy CGE model
			09:30 – 10:30	PC-LAB: Policy experiments in extended open economy CGE model
			11:00 – 12:30	Limitations of CGE models and overview of available CGE models
			14:00 – 15:30	Group work
			16:00 – 17:30	Group work
			18:00 – 19:30	Evening event – Agricultural research and study opportunities in Germany
10	07/03/2025	Friday	08:30 – 10:30	Group presentation
			11:00 – 12:30	Group presentation
			14:00 – 15:30	Group presentation
			16:00 – 17:00	Evaluation of Week 2 and Certificate Awards