農学研究科 2016 年度後期集中講義
生物資源経済学特別講義 III B

Special Lecture on Natural Resource Economics III B (Intensive Course in 2nd-Semester of 2016/2017)

Mathematical Economics for Agricultural Economists

[AGST#5 Developing & Transition Economies Studies: Lecture Series No.1]

by Professor Xiaohua YU

(Department of Agricultural Economics and Rural Development, University of Göttingen, Germany)

Some basic math techniques are crucial for a proper understanding of modern literature of agricultural economics, resource and environmental economics, as more and more mathematics is introduced into economic literature. The course will offer some basic techniques related to economic analysis and optimization (including static and dynamic optimization).

This course is designed to help graduate-level students in agricultural economics at Kyoto University understand some basic math tools for the analysis in agricultural economics, development economics, farm management, and environmental and resource economics.

Dr. Xiaohua YU is Professor (with Chair) of Agricultural Economics in Developing and Transition Countries, Courant Research Centre "Poverty, Equity, and Growth", and Department of Agricultural Economics and Rural Development, University of Göttingen.

His research interests include agricultural economics, environmental economics, applied econometrics, and China economy.

From November 2016, he is also appointed Project Professor of Kyoto University (Japan Gateway: Kyoto University Top Global Program).

- **This course is designed to be worth 1 credit.**
- **For credit:**
  - ✓ Registration is already closed.
- **For non-credit participation:**
  - ✓ Register with **Mr. KURODA** (kuroda.makoto.6a@kyoto-u.ac.jp) by emailing him your name, affiliation, and student ID number by **January 20 (Fri.)**.
  - ✓ Registration for non-credit participation will be accepted on a first-come and first-served basis and will be closed upon reaching full capacity.

SCHEDULE

Jan 25 (Wed.)
13:00-18:00
(3, 4, 5 Periods)
Jan 26 (Thur.)
13:00-18:00
(3, 4, 5 Periods)
Jan 27 (Fri.)
13:00-16:15
(3, 4 Periods)
Jan 30 (Mon.)
Final Exam 13:00-14:30

Venue: Room E217
Faculty of Agriculture Main Bldg.

Course Outline

1. Introduction
2. Differentiation and Implicit Function
3. Optimization without constraints
4. Optimization with Equality constraints
5 Optimization with Inequality constraints
6. Discrete Dynamic Programming
7. First-order Differential Equations
8. Optimal Control Theory & Some Numeric Methods
9. Final Exam

【CONTACT】
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The Asian Platform for Global Sustainability & Transcultural Studies

Japan Gateway: Kyoto University Top Global Program