Title of the course: Economics of technology adoption in agriculture

Course Description (max 2 sentences):

The core aspect of the course is to increase capacity of students in analyzing the interactions between agricultural technologies and society. The course aims to equip young researchers with skills for analysis of economic dimensions of agricultural technology adoption and identifying relevant policy options for agricultural modernization. The course will use selected theoretical, empirical and policy-oriented studies to explain how the technology adoption process can be studied such as to provide important policy messages.

Course outline:

- Microeconomics of farmer's decision making
- Induced technical change model
- Choice experiments in agricultural technology adoption
- Technology treadmill and lock-in
- Innovation diffusion in agriculture
- Diffusion research

Teaching methods:

The course uses a microeconomic theory in the design and implementation of technology adoption studies through a mix of theoretical and empirical studies aiming at

- understanding of how economic theory explains technology adoption in agriculture;
- application of methods for revealing farmers preferences toward technologies;
- enhanced skills in studying topics related technology adoption in agriculture,
- deriving important policy message from economic studies on technology adoption;
- understanding of social and economic dimensions of technology adoption.

Grading:

The students will receive a task to discuss in a group of two students a phenomenon on a selected agricultural technology and use one of the studies theories to answer questions. The questions will be distributed on the first day of the course.

Credit points (CP) and type

Course requirements

- Knowledge of English (IELTS equivalent 5.5)
- Official enrolment as a PhD student in higher education institution of Uzbekistan;
- If not a PhD student, then daily work on the topics of agricultural technology adoption;
- Knowledge of microeconomic theory

References

Arthur, B. (1989) Competing technologies increasing returns and lock-in by historical events. Economic Journal, 99 (394), 116-131.

Cochrane, W.W. (1958) Farm Prices: Myth and Reality. St. Paul: University of Minnesota Press.

Ellis, F. (1993) Peasant Economics. Farm households and agrarian development. 2nd ed. Cambridge: Cambridge University Press

Hayami, Y., Ruttan, V. (2011) Factor Prices and Technical Change in Agricultural Development: The United States and Japan, 1880–1960. In: K. Otsuka, C.F. Runge (Eds.) Can Economic Growth Be Sustained? The Collected Papers of Vernon W. Ruttan and Yujiro Hayami, Oxford University Press, Oxford, pp. 181-208.

Hensher, D.A., Rose, J.M., Greene, W.H. (2005). Applied Choice Analysis: A Primer. Cambridge University Press. pp. 92-99.

Rogers, E. M. (2010). Diffusion of innovations, Simon and Schuster.