Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PNS0163 Advanced Production Economics, 3.0 credits

Syllabus approved

2018-03-19

Subjects

Economy

Education cycle

Third cycle

Grading scale

Pass / Failed
The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

M.Sc. or equivalent studies in economics, agricultural economics, farm management, and environmental economics. Undergraduate courses in microeconomic theory and calculus are required.

Objective, including learning outcomes

The objective of this course is to expose PhD level students to the foundations of modern production economics theory. Students will acquire skills and necessary

knowledge to address and deal with production-related problems through the use of theoretical and/or analytical tools from the microeconomic theory of the firm. We will also illustrate how to apply these production theory related tools to empirical and practical cases related to firm's production decision making processes.

Content

Lectures

The course focuses on the modern microeconomic theory of the firm based on the notion of the primal and dual representation of production technology. For the primal, we start with single output technologies and the production function and then we consider functional representation for multi-input and multi-output technologies such as transformation and input and output distance functions. For the dual, we consider the cost, revenue and profit functions. Then we proceed with indirect representations of technology, both primal and dual, which are particularly useful when production units face budget or sales constraints. Last but not least we consider the directional distance functions. In all these cases, we pay special attention to the theoretical properties of the underlying functions and we show how we can use them to analyze the structure of production by means of returns to scale, various forms of the elasticity of substitution, shadow prices and of course, comparative statics results. The last part of the course is devoted to the application of these theoretical tools to empirical analysis. In particular, we consider estimating a production function or a system of cost, revenue or profit functions equations by means econometric methods.

Post-campus Assignments

After the course, registered students will receive assignments including problem-solving exercises on production economics. This is intended to prepare students for the take-home exam.

Requirements for examination

To successfully complete the course students have to write a take-home exam that will be scheduled two weeks after the course.

Additional information

Teacher: Prof. Giannis Karagiannis (University of Macedonia, Greece) in collaboration with Prof. Erik Romstad (Norwegian University of Life Science, Norway) and Prof. Timo Sipilainen (University of Helsinki, Filland)

Responsible department

Department of Economics