Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFG0039 Optimization in dynamic and stochastic decision problems, 7.5 credits

Syllabus approved

2010-06-22

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

The participants should have some knowledge of calculus, linear and nonlinear optimization before the course starts.

The course is intended for:
PhD students in management, economics, business administration, forest management,

engineering and all other sciences where dynamic and stochastic optimization problems are relevant and important.

Objective, including learning outcomes

Economic dynamic and stochastic decision problems.
Deterministic dynamic optimization in discrete time with discrete state space.
Deterministic dynamic optimization in discrete time with continuous state space.
Deterministic dynamic optimization in continuous time.
Optimal solutions to deterministic dynamic decision problems.
Stochastic dynamic optimization in discrete time.
Stochastic dynamic optimization in continuous time.
Optimal solutions to stochastic dynamic decision problems.
Applications to decision problems in forest company management in forest production, forest logistics and forest industry mills. (It does not matter if the course participant mainly is interested in the forest sector or some other sector. The decision problems are very similar in most sectors and the solution methods are the same.)

Content

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Requirements for examination

Written exam and seminar presentations of problem solutions.

Additional information

Responsible department

Department of Forest Economics