

# PhD Course in Forest Economics Spring 2010

Version 2010-02-09

Peter Lohmander

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Swedish University of Agricultural Sciences

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## **Objectives:**

After the course, the student should understand the fundamental principles of economic forestry, including the derivation of optimal decision rules in some situations. The student should be well aware of the underlying assumptions of the most typical decision rules, based on deterministic representations of reality. The student should be able to determine and understand in what ways the optimal decisions and decision rules change in case the underlying assumptions change within deterministic, single decision variable, forestry problems. The student should understand how optimal combinations of decisions can be determined in the presence of constraints caused by technology and laws. The student should also have some understanding of econometrics applied to forest economics, the consequences of information assumptions and different kinds of physical and economic disturbances, fundamental examples and applications of optimal stopping theory and more general stochastic multi period control in problems of forest sector relevance.

## **Prerequisites:**

Suggested background: Most importantly, the course participants should be able to follow and understand the lectures. A general background in some quantitative area is suggested according to the three alternatives found below:

Alternative 1: Doctoral student and MSc och BSc in forestry (or jägmästare) including higher level courses in mathematical statistics and/or forest economics.

Alternative 2: Doctoral student and MSc or BSc in economics, management or business administration including higher level courses in quantitative analysis.

Alternative 3: Doctoral student with other background (such as engineering) including quantitative analysis and some economics and/or management.

## **Contents:**

The course Forest Economics will include the theory represented in Johansson & Löfgren (1985). The field has however developed considerably since 1985 when Johansson & Löfgren published their book. Furthermore, it is important to cover empirically relevant and modern cases from different parts of the world. Hence, the course also includes the chapters on economically optimal forestry decisions in Weintraub et al (2007). Recent developments in several directions will be included in the lectures by Peter Lohmander.

**Examination:**

Written exam and individual assignments with seminar presentations

**Literature:**

Johansson, P.O., Löfgren, K.G., The Economics of Forestry and Natural Resources, Basil Blackwell, 1985

Weintraub A. et al (Editors), Handbook of Operations Research in Natural Resources, Springer, Springer Science, International Series in Operations Research and Management Science, New York, USA, 2007 (The chapters on forestry, pages 315 – 544)  
[http://www.amazon.ca/gp/reader/0387718141/ref=sib\\_dp\\_pt/701-0734992-1741115#reader-link](http://www.amazon.ca/gp/reader/0387718141/ref=sib_dp_pt/701-0734992-1741115#reader-link)

**Schedule:**

The table includes the activities in a lecture room at Swedish University of Agricultural Sciences, Umea, Sweden. The course participant will also need considerable time to study the course material including the literature and other distributed documents, to solve the individual assignments and to prepare presentations. Furthermore, individual meetings between course participants and Peter Lohmander, will sequentially be scheduled, to discuss the progress of the different assignments.

<b>Date</b>	<b>Day in the week</b>	<b>Time</b>	<b>Contents</b>
March 8	Monday	12.15 – 15.00	Lecture (Peter Lohmander), Introduction
March 16	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
March 23	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
March 30	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
April 6	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
April 13	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
April 20	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
April 27	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
May 4	Tuesday	12.15 – 15.00	Lecture (Peter Lohmander)
May 11	Tuesday	12.15 – 15.00	Seminars
May 19	Wednesday	09.15 – 15.00	Written exam

**Old version of the course description, approved 3 October 2005:**

<http://www.slu.se/?id=547&Kurskod=PFS0017> (Document downloaded 2010-02-09)

## Postgraduate Courses

**PFS0017 Forest Economics, 7.5 HEC**

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**Course Organiser**

Department of Forest Economics

Peter Lohmander, E-mail: [Peter.Lohmander@sekon.slu.se](mailto:Peter.Lohmander@sekon.slu.se)

**Language:** English

**Subject:** Economy

**Syllabus approved:** 3 October 2005

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**Content**

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**Examination**

Written exam