Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFG0009 Design of Experiments and Analysis of Variance, 7.5 credits

Syllabus approved

2003-01-08

Subjects

Statistics, Computer Science and Systems Science

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

Basic courses in mathematical statistics at SLU or equivalently.

Objective, including learning outcomes

After the course students should be able to design fairly advanced experiments in an intelligent way and perform adequate analyses.

Content

1) Design of experiments: Nuisance variables, basic designs (CR, RB, LS, SP and so forth), practical training in constructing experiments that require combination of basic designs. 2) Analysis of variance: Complete theory for the fixed effect ANOVA model (including multiple comparisons), understanding and interpretation of random and mixed models (including repeated measurements), computer exercises on all three kinds of models. 3) Introduction to alternative methods. 4) Own experiment: Design, model, data simulation and analysis.

Requirements for examination

Written examination and performance of an own hypothetical experiment (from design to analysis).

Additional information

The course is given by an Environmental Certified Department (ISO 14001).

Responsible department

Department of Forest Resource Management