



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

# SLUkurs

## Syllabus

**POG0020 Generalized linear models, 7.5 credits**

## Syllabus approved

2002-08-07

## 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

The course is at the C level in statistics/mathematical statistics

## Objective, including learning outcomes

The aims of the course are to give an introduction to theory and application of generalized linear models to give training in the analysis of actual data using

generalized linear  
models

### **Content**

An overview of linear statistical models. Generalized linear models: likelihood-based inference. Models with different link functions and distributions, such as models for discrete data; binary (logistic) regression; analysis of contingency tables. Introduction to log-linear models. Estimation and model fitting. Residual analysis. Overdispersion. Introduction to quasi-likelihood. Practical examples from different application areas with an emphasis on medical applications.

The teaching is given as lectures and classes. There is no compulsory teaching, but compulsory hand-in exercises that are solved using some statistical program package.

### **Requirements for examination**

Examination is performed through a written final exam and hand-in exercises during the course.

### **Additional information**

### **Responsible department**

Department of Economics