Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PNS0180 Statistics III: Regression analysis, 4.0 credits

Syllabus approved

2019-03-08

Subjects

Mathematic Statistics

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

Statistics I: Basic Statistics or equivalent

Objective, including learning outcomes

The objective of the course is to give an overview of linear, nonlinear and nonparametric regression. On completion of the course, the student will be able to:

- specify regression models including conditions and assumptions

- select an appropriate regression model for a given problem
- carry out a regression analysis in the statistical software R or SAS
- interpret and evaluate results correctly and draw reasonable conclusions
- clearly and concisely communicate results and conclusions

Content

The course will cover the following topics:
- Simple linear regression.
- Multiple linear regression.
- Nonlinear models.
- Nonparametric regression and generalized additive models (GAM).
- Analysis of residuals.

Requirements for examination

Requirements for examination:
Passed exercises and passed examination in written and/or oral form.

Additional information

Responsible department

Department of Energy and Technology