



# **P000002, Statistics III: Regression Analysis, 4.0 Hp**

## **Syllabus**

Finalized by: Institution för Energi och Teknik, 2022-08-16

Valid from: VT2023

### **Level within study regulation:**

Third cycle

### **Subject:**

- Mathematical Statistics

### **Grading scale:**

Pass / Failed

### **Course language:**

Swedish

### **Entry requirements:**

Statistics I: Basic Statistics or equivalent

### **Objectives:**

The objective of the course is to give an overview of linear, nonlinear and nonparametric regression models for continuous response variables with applications in the agricultural sciences and related fields of research. On completion of the course, the student will be able to:

- specify regression models including assumptions
- select an appropriate regression model for a given problem
- use the statistical software R for regression analysis
- 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 regression
- nonparametric regression and generalized additive models (GAM).
- assumptions and transformation of data

### **Modes of assessment:**

Passed exercises and passed examination in written and/or oral form - If a student has failed an examination, the examiner has the right to issue supplementary assignments. This applies if it is possible and there are grounds to do so.

- The examiner can provide an adapted assessment to students entitled to study support for students with disabilities following a decision by the university. Examiners may also issue an adapted examination or provide an alternative way for the students to take the exam.
- If this syllabus is withdrawn, SLU may introduce transitional provisions for examining students admitted based on this syllabus and who have not yet passed the course.
- For the assessment of an independent project (degree project), the examiner may also allow a student to add supplemental information after the deadline for submission. Read more in the Education Planning and Administration Handbook.

### **Organisation:**

Department of Energy and Technology

## Supplementary information

### **Other information:**

- The right to participate in teaching and/or supervision only applies for the course instance the student was admitted to and registered on.
- If there are special reasons, students are entitled to participate in components with compulsory attendance when the course is given again. Read more in the Education Planning and Administration Handbook.