Kursnamn Modern statistics in natural sciences
Name of course

Omfattning (högskolepoäng) 5hp
ECTS credits

Tidsperiod January-March 2016
Course period

Antal platser 40
Maximum number of participants

Undervisningsspråk English
Language of instruction

Kursens syfte samt motivering till varför den bör vara fakultetsgemensam (max 150 ord)
Aim of course and motivation as to why it should be considered “multidisciplinary” to the extent that the faculty should allocate extra financing.

To give an introduction to the most commonly applied modern statistical techniques and tools used in a wide range of natural sciences. In addition to providing you with an overview of the statistical “tool-box”, the course aims at giving an understanding of the philosophy and reasoning behind statistical design and inference. This is a general statistic course that attracts many students from biology, geosciences, chemistry, information technology and other related fields.

Kursinnehåll, kursens uppläggning samt examinationsform (max 150 ord)
Contents, study format and form of examination

Experimental designs leading to ANOVA or ANCOVA, including block experiments, repeated measurement designs, nested and factorial designs. Multiple regression, including techniques for selecting variables and evaluating models. Generalized linear models (GLIM) with logistic and Poisson regression. Introduction to power analysis, multivariate analysis, resampling and permutation techniques. The course consists of lectures, discussions and exercises.

Målgrupp/er (specifiera ämnen/inriktningar) samt rekommenderade förkunskaper
Target group/s (specify, if possible, subject/specialization) and recommended background

PhD students in biology, earth sciences and other natural sciences. The course is also offered as an advanced level course for master students.

Huvudansvarig institution Institut för ekologi och genetik
Department with main responsibility

Andra inblandade institutioner (specifiera hur).
Other departments involved (specify how).

Kontaktperson/er (namn, e-postadress)
Contact person (name, e-mail address)
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Anmälan om kursdeltagande till
Application from course participants should be sent to
http://www.ebc.uu.se/utbildning/doktorand/kurser/