COURSE DETAIL

EXPERIMENTAL DESIGN AND STATISTICAL METHODS IN BIOLOGY
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 110
UCEAP Course Suffix
UCEAP Official Title EXPERIMENTAL DESIGN AND STATISTICAL METHODS IN BIOLOGY
UCEAP Transcript Title EXP DESGN&STAT MTHD
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
The course gives a broad overview of experimental designs and statistical methods in order for students to plan their own experiments and to analyze existing data. The course provides an overview of a range of statistical concepts and tools including: regression, ANOVA, interaction between factors, design considerations, model check and fit, data representation, systematic and random effects, logistic regression, contingency tables, and use of statistical software (SAS). The most commonly used experimental designs are covered, including their advantages with respect to the subsequent statistical analysis of data. Students select or, if necessary, develop a statistical model for the experimental design, state the relevant statistical hypotheses, conduct the statistical analysis (generally using statistical software), present the results in a clear and understandable way, and finally interpret the results in a biological context to reach a sound conclusion based on the empirical evidence. In addition, the student gains the ability to provide theoretical insight in statistics and to understand and comment critically on the use of statistics by others.

Language(s) of Instruction
English

Host Institution Course Number
NBIK14016U

Host Institution Course Title
EXPERIMENTAL DESIGN AND STATISTICAL METHODS IN BIOLOGY

Host Institution Course Details

Host Institution Campus
Science

Host Institution Faculty

Host Institution Degree

Host Institution Department
Biology/Mathematical Sciences

Course Last Reviewed

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