

Independent course

Course code FID53A Established 2014-12-17

Last reviewed. Not specified

Valid until further notice

## **STATISTICAL ANALYSIS IN SPORT SCIENCE, 7.5 CREDITS**

### **General course information**

This course is offered as an independent course.

Discipline: Sport  
Subject: Sport science  
Scope: 7.5 credits  
Level: Advanced

Processed by the Department of Sport and Health Sciences 2014-12-08.

This course profile was approved by the Board of the Faculty for Undergraduate Education 2014-12-17.

This course profile is valid from Autumn study period of 2015.

### **Admission requirements and selection**

#### **General pre-requisites**

General eligibility for advanced level, i.e. completed an undergraduate degree of 180 credits or equivalent.

#### **Specific pre-requisites**

Bachelor's degree in health care, nutrition, physical education or equivalent that includes at least 15 credits in human biology or equivalent.

#### **Selection**

In the case of receiving more applicants than the number of places available, 50% of the cohort will be accepted based on their academic credits and 50% by a lottery system after submitting a personal written justification as to why you want to join the course. Students studying within GIH's Master's or doctoral program have priority to the course.

### **Learning objectives**

The student should be able to:

- Upload and process data in a statistical program
- Have a deep understanding of the statistical analysis tests and interpretation of their results
- Conduct analyses to test for reliability and validity
- Justify the choice of method on the basis of the research question and the study design
- Apply parametric and non-parametric tests to detect statistical differences and perform correlations, multivariate and survival analysis

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## **Content and structure**

The course consists of lectures and laboratory practical sessions which cover the following topics:

- Detecting differences (t-test, ANOVA, chi squared test, Mann Whitney U test, Wilcoxon)
- Relationship analyses (correlation and linear, logistic and multinomial regressions)
- Survival analysis (Cox regression)

## **Teaching and learning activities**

This course includes lectures, laboratory and individual work.

## **Progression**

The course is aimed at students with a basic knowledge of statistics and experience conducting analysis themselves. Through increasingly complex analysis and broader application and connection to the research question and study design, the student will learn to independently test hypotheses by analysing of their own data sets.

## **Assessment**

### **Requirements**

A number of laboratory practicals are obligatory.

### **Mode of assessment**

- Written examination

### **Timing of examinations and re-examinations**

The examinations are held during the course as detailed in the course outline, which students should expect to receive at the beginning of the course. Re-examinations will be offered no sooner than three weeks after the student has received results of the original examination. Re-examinations are held at the earliest three weeks after the completion of the relevant part of the course, before the start of the fall term and / or when the course is next offered.

### **Grading**

Possible grades include: Pass with Distinction, Pass or Fail. Students should expect to receive defined criteria at the commencement of the course. Grades will be reported to the study administrator no later than three weeks after the completion of the course.

### **Course evaluation**

After completion of the course each student will have the opportunity to evaluate the course and the lecturer will complete a self-evaluation. These evaluations will be returned to the student group and the examiner within 3 weeks.

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### **Student Influence**

Student participation takes place by way of student representation on the Undergraduate Education committee.

### **Literature and other teaching aids**

Required:

- Ejlertsson, G. (2012). Statistik för hälsovetenskaperna. Lund: Studentlitteratur, 180 pages.
- Vincent, W.J., Weir, J.P. (2012). Statistics in Kinesiology. 4th ed. Champaign, IL: Human Kinetics, 359 pages.