



DEPARTMENT OF FOOD AND NUTRITION, AND SPORT SCIENCE

IKA305 Applied Quantitative Methods, 7.5 credits

Tillämpade kvantitativa metoder, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Food and Nutrition, and Sport Science on 2017-10-23 and was last revised on 2019-10-23 to be valid from 2019-10-23, autumn semester of 2019.

Field of education: Medicine 50% and Social Sciences 50%

Department: Department of Food and Nutrition, and Sport Science

Position in the educational system

The course is a single subject in-dept course.

Main field of studies

Food and Nutrition

Sport Science

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

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Entry requirements

Bachelor's degree in Food and Nutrition, Nutrition, Sport Science, Medicine, Physiotherapy or equivalent.

Learning outcomes

On successful completion of the course the student will be able to:

Knowledge and understanding

- use statistical terminology and concepts to discuss statistical analysis.

- select proper statistical technique in relation to research question, study design, measurement method och properties of the data.
- describe assumptions made in statistical analyses.

Competence and skills

- use statistical software to analyze quantitative data.
- use different statistical techniques to analyze quantitative data.
- use statistical techniques to determine fulfillment of assumptions for statistical analyses.
- analyze, summarize and present statistical information.
- write a research report based on quantitative data.

Judgement and approach

- criticize and argument for choices of statistical technique for analysis of quantitative data in relation to research question, study design, measurement method and properties of the data.
- evaluate statistical results in respective of their clinical relevance and importance.

Course content

In this course, students will learn basic quantitative research design and data analysis methodology in empirical food and nutrition and sport science research. An emphasis of the course is given to practical data analysis. Therefore, the main goal is to apply statistical theory and use the statistics software IBM SPSS. The students work with and analyze real data and present the results orally and written. The course aims towards students looking for a profound understanding of the application of statistical methods within social sciences and medicine.

Statistical techniques that are applied in the course concern group comparisons, paired measurements, repeated measurements, regression analysis, analysis of variance, mixed model, as well as graphical techniques. The course deals with the choice of parametric versus non-parametric techniques depending on the properties of the data.

Form of teaching

Teaching is arranged in lectures, seminars and workshops.

Language of instruction: English

Assessment

The course is examined through written reports and oral presentations. All mandatory course components need to be completed to pass the course.

If a student is absent from mandatory components, he/she is responsible to contact the person responsible for the course to be provided another course opportunity or alternative task.

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In cases where a course has been discontinued or has undergone major changes, the student shall normally be guaranteed at least three examination occasions (including the ordinary examination) during a period of at least one year from the last time the course was given. It must not go against Chapter 6 Section 21 of Higher Education Ordinance.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

All mandatory course components need to be completed to pass the course. To pass with Distinction (VG), all written reports should be graded VG.

The final grade is based on the combined performance of all course components in accordance with the following conversion table:

- Group assignment, 1: 25%
- Group assignment, 2: 25%
- Individual report with oral presentation: 50%

Adjustments to international grading standards will be provided.

Course evaluation

Written evaluation is performed using the teaching platform and the result guides development and planning of forthcoming course occasions. The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course. In addition to the written, summative evaluation, oral, formative evaluations may occur. The person responsible for the course compile a report after the course has finished.

Additional information

In this course Statistical Package for the Social Sciences (SPSS) computer software will be used. Students are expected to have access to SPSS, which is available through the Gothenburg University's homepage (Student portal).