## Quantitative Analysis (K000610)

Course size   (nominal values; actual values may depend on programme)

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|---|---|---|---|
| Credits 7.0 | Study time 210 h | Contact hrs | 60.0 h |

Course offerings and teaching methods in academic year 2018-2019

| | | | |
|---|---|---|---|
| A (semester 1) | Dutch | lecture | 30.0 h |
| | | seminar: practical PC room classes | 30.0 h |

Lecturers in academic year 2018-2019

| | | |
|---|---|---|
| Demanet, Jannick | PS04 | lecturer-in-charge |

| Offered in the following programmes in 2018-2019 | crdts | offering |
|---|---|---|
| Bachelor of Science in Sociology | 7 | A |
| Preparatory Course Master of Science in Sociology | 7 | A |

Teaching languages

Dutch

Keywords

social statistics, applied statistics, quantitative methods, descriptive statistics, inferential statistics, data analysis, multiple linear regression analysis, analysis of variance, multivariate analysis, SPSS

Position of the course

This course has two main objectives. First, it gives an introduction to the multiple linear regression model and the analysis of variance. Building further on the knowledge and insights acquired in the educational component 'Statistics' (1BA), the course addresses the basics of statistical control and multivariate analysis. The second objective concerns the analysis of large and complex datasets in a correct and sound manner. Students learn the basic techniques for data transformations and statistical analyses in the statistical analysis software package SPSS. To this purpose, we will use real datasets, taking research questions embedded in sociological theory as our point of departure.
The aimed competences of this component are threefold. First, it aims to learn students to choose the appropriate statistical technique for specific research questions. Second, students are learned to carry out the chosen technique adequately. Third, students are learned to interpret the results of their analyses aptly.
In the coming years, students can build further on the knowledge, insights and skills they have acquired here, in view of learning more advanced statistical techniques and models. For the degree program of Sociology this is, more specifically: 'Multivariate analysis' (3BA).

Contents

- repitition and integration of the basic principles of descriptive and inferential statistics statistical control
- statistical control
- basic multiple linear regression model
- data assumptions
- extensions of the linear regression model: non-metrical independent variables, interaction effects
- analysis of variance (anova)
- initiation to spss: basic principles, data transformation and statistical analyses by way of the menu interface and syntax commands

Initial competences

To have successfully completed 'Statistics' or to have acquired the knowledge, skills

and insights targeted in this component in another way.

Final competences

1  For the covered statistical techniques, the component expects students upon completion:
   • to have insight into the possibilities and limitations of quantitative techniques of analysis for social sciences research;

2  • to understand published statistical analyses, to be able to correctly interpret, and critically evaluate, them;
3  • to be able to make a sound choice from different statistical techniques to answer a research question in a scientifically sound manner;
4  • to be able to correctly calculate and interpret statistical measures;
5  • to understand the advantages and limitations of the different statistical measures;
6  • to be able to independently translate a research question in a statistical model;
7  • to be able to analyze a statistical model in SPSS;
8  • to be able to independently carry out the necessary data transformations in SPSS;
9  • to have become a critical and legitimate user of statistics (life-long learning)
10  • to be able to adjust the personal learning process.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture, seminar: practical PC room classes

Extra information on the teaching methods

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Learning materials and price

reader
estimated cost: 30 euro

References

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Course content-related study coaching

- e-learning via Minerva: FAQ, interactive exercises, interactive demonstrations, example of an exam
- individual support during consultation hours

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions

Examination methods in case of permanent evaluation


Possibilities of retake  in case of permanent evaluation

examination during the second examination period is possible

Extra information on the examination methods

Emphasis lies on insight- and application-focused questions.

Calculation of the examination mark

Periodic assessment (100%)

Facilities for Working Students

1. Possible rescheduling of the examination to a different time.
2. Alternative time for feedback is possible.