Course Specifications
Valid as from the academic year 2017-2018

Course

Statistics (A000352)

Valid as from the academic year 2017-2018

Course

Specifications

Lecturers in academic year 2018-2019

Lievens, John
PS04 lecturer-in-charge

Course offerings and teaching methods in academic year 2018-2019

A (semester 1)
Dutch

seminar: coached exercises
lecture

30.0 h
25.0 h

Offered in the following programmes in 2018-2019

Bachelor of Arts in African Languages and Cultures
5 A

Linking Course Master of Arts in Gender and Diversity
5 A

Teaching languages

Dutch

Keywords

Statistics in the social sciences, applied statistics, quantitative methods, descriptive statistics, inductive (inferential) statistics

Position of the course

This course offers an introduction to the basic principles of statistics in the social sciences. Quantitative research is one of the main tools a social scientist has to observe society. Population and survey data provide insight into social phenomena, trends and social change. Descriptive statistics offers tools to synthesize large quantities of information in a systematic and scientifically sound manner. Inductive statistics provide the method to draw conclusions about an entire population out of data acquired from a (correctly drawn) sample. The main objective of this course is to train students to become informed and critical users of simple statistical techniques. The knowledge, insights and skills acquired here will serve, in the coming years, as a basis for further learning of more advanced statistical techniques and models.

Contents

Introduction:
• Statistics in social science
• Measuring, statistic units, variables, measuring levels and data matrix.

Descriptive statistics:
• Description of univariate distributions: frequency tables, graphical presentations, measures of centrality, dispersion and shape.
• Theoretical distributions, normal distribution.
• Description of the relationship between two variables: cross tables, scatterplots, association measures, correlation and regression analysis.
• Statistical control: the relationship between more than two variables.

Inferential statistics:
• Theoretical distributions, binomial partition
• Chance, probability, probability models, expectation and variation of stochastic variables
• Sample survey variation, sampling distribution.
• Estimating with reliability and significance test for counts, fractions, means and the relationship between two variables.

Initial competences

Recommended
Learning outcomes secondary education. Four hours of maths in the final years of...
secondary education provides a sufficient starting level. A website with the required prior knowledge of mathematics is available enabling students with insufficient mathematical skills to update their knowledge.

Final competences
1. To have insight in the possibilities and limitations of quantitative analyses for social-scientific research.
2. To understand and to be able to correctly interpret and critically assess published statistical analyses.
3. To be able to make a well-considered choice from the different statistical techniques in order to answer a scientific research question in a solid, sound manner.
4. To be able to correctly calculate and interpret statistical measures.
5. To recognize the advantages and the limitations of the different statistical measures.
6. To become a critical and responsible user of statistics.

Conditions for credit contract
Access to this course unit via a credit contract is unrestricted: the student takes into consideration the conditions mentioned in ‘Starting Competences’

Conditions for exam contract
This course unit cannot be taken via an exam contract

Teaching methods
Lecture, seminar: coached exercises

Extra information on the teaching methods
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Learning materials and price
Estimated cost: 40 euro

References
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Course content-related study coaching
• E-learning via Minerva: FAQ, interactive exercises, interactive demos, example exam, refreshment of mathematical knowledge.
• Individual guidance during office hours
• Guidance by the faculty’s study support.

Evaluation methods
end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period
Written examination with multiple choice questions

Examination methods in case of periodic evaluation during the second examination period
Written examination with multiple choice questions

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation
not applicable

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 exemption from educational activities requiring student attendance
2. Possible rescheduling of the examination to a different time in the same academic year
3. Alternative time for feedback is possible
For more information concerning flexible learning: contact the monitoring service of the faculty of Arts and philosophy

(Approved)