Course Specifications
Valid as from the academic year 2017-2018

Statistics for Criminology (B000580)

Course offerings and teaching methods in academic year 2017-2018
A (semester 2) Dutch seminar: coached 30.0 h guided self-study 30.0 h

Lecturers in academic year 2017-2018
Pauwels, Lieven RE23 lecturer-in-charge

Offered in the following programmes in 2017-2018
Bachelor of Science in Criminological Sciences 8 A

Teaching languages
Dutch

Keywords
statistics for criminologists, applied statistics, quantitative methods, descriptive statistics, inferential statistics, multivariate statistics

Position of the course
This course provides an introduction to the core principles of statistics for criminologists. Quantitative research is one important tool that social scientists in general and criminologists in particular use to observe society. Official data from public administrations at different levels of the criminal justice system tell their own story of problems of insecurity based on the statistics these services gather. Descriptive statistics provide the tools to systematically synthesise large amounts of complex data into a limited number of interpretable coefficients. Inferential statistics provides the means to infer conclusions for the full population based on sample data. The main objective of this course is to train students in becoming conscious and critical users of statistics. Finally, multivariate statistics are introduced. The here obtained knowledge, insights and skills can be further elaborated in later years where more advanced statistical techniques are taught.

Contents

Introduction
- Statistics in social science research with specific emphasis on criminology
- Measuring, units, variables, levels of measurement, data matrix
- The use of statistical software: an introduction to the use of SPSS/PASW

Descriptive statistics
- univariate statistics: frequency distribution, graphics, measures for centrality, dispersion and shape
- theoretical distributions, normal distribution
- bivariate statistics: cross-tabulation, scatterplots, measures of association, correlation and regression analysis
- statistical control: relationships between more than two variables
- issues of non-response, spurious correlation
- introduction to multiple regression and path-analysis

Inferential statistics
- theoretical distributions: normal and binomial distribution
- sample variability, sampling distribution
- confidence intervals and significance tests for counts, proportions, means and the association between two variables.

(Aapproved)
**Multivariate statistics**
- Simpson’s paradox
- Partial correlations
- Multiple regression analysis
- Introduction into the philosophy of path analysis

**Initial competences**

Final objectives of secondary education. Three hours of maths in the final years of secondary education provides a proper starting level.

**Final competences**

1. Have insight into the opportunities and limitations of quantitative techniques for criminological research.
2. Understand statistical analyses in the literature, be able to interpret and critically evaluate the results.
3. Make an informed decision of a proper statistical technique to answer a specific research question.
4. Be able to correctly calculate and interpret statistical coefficients.
5. Have insight into the opportunities and limitations of statistical coefficients.
6. Become a critical and informed user of univariate, bivariate, inferential and multivariate 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**

Guided self-study, seminar: coached exercises

**Extra information on the teaching methods**

The guided **self-study** will be organized following the ‘flipping the classroom’ principle. This means that students are expected to study the statistical theoretical background individually and in a self-reliant way through the extensive support of e-learning material (theoretical courses on dvd and recorded slides that are placed on Minerva beforehand, examples of theory-related questions), before they start a discussion with the lecturer and before they start with the exercises. Subsequently, interactive contact moments will be organized with the lecturer, in which questions and problems concerning the theory can be discussed.

The course’s teaching assistant organizes the statistical exercises. At the exam, both theoretical knowledge and statistical applications will be probed.

**Learning materials and price**


**References**


**Course content-related study coaching**

- e-learning via Minerva: course slides, exercises, forum
- individual help during an office hour for student consultations of the assistant, and before, during and after the exercises
- self-test
- additional consultations through the “Monitoraat”

**Evaluation methods**

end-of-term evaluation

(Approved)
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
  Written exam using multiple choice answers. Emphasis lies on insight and application rather than knowledge as such.

Calculation of the examination mark
  100% periodic evaluation.
  Written exam using multiple choice answers. Emphasis lies on insight and application rather than knowledge as such.
  Format cutting score according to standard setting (based on the number of questions and response categories).