GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2024-2025

Quantitative Research Methods in Linguistics (A004200)

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

Credits 5.0 **Study time 150 h**

Course offerings and teaching methods in academic year 2024-2025

B (semester 2)	Dutch	Gent	lecture
			seminar

Lecturers in academic year 2024-2025

De Cuypere, Ludovic	LW06	staff member
Willems, Klaas	LW06	lecturer-in-charge

Offered in the following programmes in 2024-2025	crdts	offering
Bachelor of Arts in Linguistics and Literature(main subject Dutch - English)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - French)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - German)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - Greek)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - Italian)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - Latin)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - Spanish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Dutch - Swedish)	5	B
Bachelor of Arts in Applied Language Studies: a combination of at least two languages(main subject Dutch, English, Language Technology)	5	B
Bachelor of Arts in Applied Language Studies: a combination of at least two languages(main subject Dutch, French, Language Technology)	5	B
Bachelor of Arts in Applied Language Studies: a combination of at least two languages(main subject Dutch, German, Language Technology)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - German)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - Greek)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - Italian)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - Latin)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - Spanish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject English - Swedish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - English)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - German)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - Greek)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - Italian)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - Latin)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - Spanish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject French - Swedish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject German - Greek)	5	B
Bachelor of Arts in Linguistics and Literature(main subject German - Italian)	5	B
Bachelor of Arts in Linguistics and Literature(main subject German - Spanish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject German - Swedish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Latin - Greek)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Latin - Italian)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Latin - Spanish)	5	B
Bachelor of Arts in Linguistics and Literature(main subject Latin - Swedish)	5	B
Preparatory Course Master of Arts in Multilingual Communication: a combination of at	5	B

least two languages		B
Preparatory Course Master of Arts in Translation: a combination of at least two languages	5	B
Elective Set Linguistics	5	B
Elective Set Southeast-European Language	5	B

Teaching languages

Dutch

Keywords

Statistics, data-analysis

Position of the course

This course contributes to the development of linguistic research competences of the student. The course will enable students to describe and analuze linguistic research data statistically by executing basic statistical tests. The student will also learn to critically interprete statistical analyses and results in linguistic publications.

Contents

- Study design (randomisation, study vs. control group, corpus annotation, quantitave vs. qualitative research methods, observational vs. experimental research)
- The following types of data will be discussed: corpusdata on syntactic alternations and lexical variation, phonological data, data from attitudinal research and psyholinguistic experiments, sociolinguistic data and inquiry data.
- Data annotation and simple questioning of data
- The most important theoretical partitions (normal, binomial and chi-square)
- Description of univariate and bivariate data (bar chart, histogram, boxplot, qq-plot etc.)
- Point estimator and confidence interval for population averages in normal data or big sample surveys
- Formulating zero hypothesis and alternative hypothesis
- t-test (one sample and two sample)
- Chi-square test
- Variation analysis
- Linear regression

Initial competences

Knowledge of linguistics concepts and theories from BA1 and BA2

Final competences

1 Students will be able to draw up and input data correctly in statistical software packages
2 To understand basic concepts and argumentation in quantitative research methodology (zero vs. alternative hypothesis, p-value, probability, stochastic dependency, measures of central tendency, operationalisation, etc)
3 To describe a simole dataset statistically (including graphic representation) using a software package
4 To excecute simple statistical tests in a software package
5 To adopt a critical and inquisitive attitude towards research of their own and that of others. Students are free to make use of Generative Artificial Intelligence (GAI) to complete the written assignment. Their knowledge of the code will be assessed during the oral examination part. It is ip to the students themselves to use GAI in a responsible manner.

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

Access to this course unit via an exam contract is unrestricted

Teaching methods

Seminar, Lecture

Extra information on the teaching methods

PC exercises: data analysis in statistical software packages. PC exercises take

palce on campus (as a rule, exercises are not recorded).

Study material

Type: Handbook

Name: Statistics for linguistics. A practical introduction to R
Indicative price: € 10
Optional: no
Language : Dutch
Author : Ludovic De Cuypere
Number of Pages : 218
Oldest Usable Edition : 2024
Online Available : Yes
Available in the Library : No
Available through Student Association : No
Usability and Lifetime within the Course Unit : intensive
Usability and Lifetime within the Study Programme : regularly
Usability and Lifetime after the Study Programme : regularly

References

Handboek: De Cuypere, L. (2024). *Statistiek in de taalwetenschap. Een praktijkgerichte inleiding met R*. Het handbook wordt als pdf en online ter beschikking gesteld.

Course content-related study coaching

Students are supervised individually during classes. Additional tutoring by the lecturer is possible by appointment.

Assessment moments

end-of-term and continuous assessment

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

Oral assessment, Written assessment open-book

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

Oral assessment, Written assessment open-book

Examination methods in case of permanent assessment

Peer and/or self assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

The assignment is meant to assess the statistical abilities of the student as well as his/her insight in statistical techniques and results.
The written exam probes the interpretation of the results of statistical techniques and the critical understanding of statistical results in the linguistic publications.
The oral assessment probes the students' understanding of statistical techniques and the content of the assignment while also examining the students' knowledge of theoretical concepts of statistical analyses.

Calculation of the examination mark

Written exam: 40%, oral exam: 20%, self-assessment: 10%, paper: 20%
Students have to participate in all four parts; otherwise the end score is 9/20, independent of the result for the written and oral exam.

Facilities for Working Students

Facilities:
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 Feedback can be given by e-mail or during an appointment during office hours