

Advanced Methods in Data Analysis and Geohumanities (A006790)

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

Credits 5.0

Study time 150 h

Course offerings in academic year 2027-2028

A (semester 1)

English

Gent

Lecturers in academic year 2027-2028

Birkholz, Julie

LW03

lecturer-in-charge

Blomme, Hans

LW03

staff member

Huskens, Gert

LW03

co-lecturer

Messens, Fien

LW03

staff member

Offered in the following programmes in 2027-2028

[Master of Science in Teaching in Arts and Humanities \(main subject History\)](#)

crdts

5

offering

A

[Master of Arts in History](#)

5

A

[Exchange Programme History](#)

5

A

Teaching languages

English

Keywords

Quantitative Methods, Data Analysis, Network Analysis, Geohumanities

Position of the course

This Master's course builds upon basic knowledge of methods and techniques in the humanities. It is situated within the domain of **Digital Humanities**, emphasizing the intersection of advanced computational methods and critical interpretation of human and cultural data. It is essential for students who will implement digital methods, spatial studies, or computational techniques within the humanities.

Contents

The course covers advanced methods for analyzing complex, often unstructured, spatial and historical data.

Initial competences

A basic understanding of data and data analysis.

Critical analysis and academic writing skills.

Final competences

- 1 Select the most appropriate advanced quantitative and computational methods for a specific research question.
- 2 Independently process, analyze, and visualize complex, spatial, and unstructured datasets (text, location data, etc.) using computational tools.
- 3 Critically interpret the results of data analysis within the broader context.
- 4 To prepare a comprehensive methodological report that includes both the technical implementation and critical reflection on the findings.
- 5 Have insight into the methodology of history.
- 6 Have the ability to critically apply quantitative and qualitative methods and techniques.
- 7 Be conscious of the importance of scientific integrity.
- 8 Have insight into how related human and social sciences function.
- 9 Be able to apply the principles of digital source criticism to the own research objects in an independent and scientific manner.

- 10 Be able to compare, select, use responsibly and critically evaluate digital formats to create own digital versions of analogue or digital research objects.
- 11 Be able to compare, select, use responsibly and critically evaluate digital methods to collect and manage analogue or digital research objects in a structured manner. Be able to designing a data model that structures (relationships between) properties of research objects and operationalising this model in the form of a database.
- 12 Be able to compare, select, use responsibly and critically evaluate digital tools to improve the quality of digital research objects or datasets.
- 13 Be able to digitally enrich research objects with information such as annotations or metadata.
- 14 Recognise repetitive tasks that can be automated and find and use digital applications to perform that task.
- 15 Be able to compare, select, use responsibly and critically evaluate digital analysis methods to perform analyses (content, network, relational, spatial, structural or stylistic).
- 16 Be able to compare, select, use responsibly and critically evaluate digital visualisation methods in order to carry out analyses or present research results.
- 17 Use digital methods for project collaboration in one or more phases of a research process.
- 18 Be familiar with the basic concepts and the inter- and transdisciplinary possibilities of Digital Humanities.
- 19 Digital competence: familiarity with the basic concepts and the inter(trans)disciplinary possibilities of Digital Humanities.

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

Group work, Seminar, Lecture, Peer teaching

Extra information on the teaching methods

- Group work: preparing a dossier in group.
- Peer teaching: presentation of a dossier.
- Working lecture: group discussion.
- *The educational programme views lecture recordings as a tool to cover justified absences (working students; long-term illness; etc.) and thus as a substitute for actual attendance. Recordings of courses are not a study aid. Therefore, the programme recommends the following: (1) the lecturer has the autonomy to decide whether to make recordings for lectures, whereby (2) these are more appropriate for lectures than for tutorials; (3) Lecture recordings are made available only during teaching weeks and are removed at the start of the block and examination period; (4) The lecturer may decide whether the recordings are given only to a limited group or to all students.*

Study material

Type: Slides

Name: PowerPoint presentation

Indicative price: Free or paid by faculty

Optional: no

Type: Reader

Name: Reader

Indicative price: Free or paid by faculty

Optional: no

References

These will be announced by topic at the beginning of the academic year.

Course content-related study coaching

Ufora, module leader is available through appointment, feedback after presentations and assignments

Assessment moments

continuous assessment

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

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

Examination methods in case of permanent assessment

Presentation, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

Individual assignment + group assignment and presentation

Calculation of the examination mark

The individual written assignment counts for 75% of the marks and the group work of the final assignment counts for 25%.

Facilities for Working Students

- 1 Student attendance during educational activities is required;
 - 2 Possible rescheduling of the examination to a different time in the same academic year;
 - 3 Feedback can be given at an appointment during and after office hours.
- For more information concerning flexible learning: contact the monitoring service of the faculty of Arts and philosophy