# Data Visualization of History (A004002)

**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 2023-2024**

| | | | |
|---|---|---|---|
| A (semester 2) | Dutch | Gent | lecture |
| | | | independent work |
| | | | seminar |

**Lecturers in academic year 2023-2024**

| | | |
|---|---|---|
| Blomme, Hans | LW03 | staff member |
| Danniau, Fien | LW03 | staff member |
| Ducatteeuw, Vincent | LW03 | staff member |
| Birkholz, Julie | LW03 | lecturer-in-charge |
| Verbruggen, Christophe | LW03 | co-lecturer |

**Offered in the following programmes in 2023-2024**

| | crdts | offering |
|---|---|---|
| Bachelor of Arts in Art History, Musicology and Theatre Studies | 5 | A |
| Bachelor of Arts in History | 5 | A |
| Linking Course Master of Arts in History | 5 | A |
| Preparatory Course Master of Arts in History | 5 | A |

**Teaching languages**

Dutch

**Keywords**

Digital humanities, digital history, historical cartography, social network analysis, data visualisation, data management and data mining, timelines, software

**Position of the course**

Students are introduced to the context and practices of digital history. They get to know tools and techniques for the collection and visualization of historical data and how to use them in respect to specific research questions. They obtain insights in geographic presentations of historical data and learn how to assimilate them in combination with a longitudinal and historical perspective. They are able to make network analyses and historical maps and to use tools for data visualization for historical analysis and research communication.

**Contents**

After a general introduction to data visualisation and digital humanities, the course is organised according to successive modules. Theoretical concepts, research practices and software/tools are discussed in each module. Students learn how to work with the concrete tools and software packages.
• Data Management and cleaning (e.g. OpenRefine)
• Social network analysis (e.g. Gephi, UCINET, NodeXL, NETDRAW, Networkx)
• GIS Software (e.g. QGIS, ArcGIS)
• Text Analysis (e.g. named entity recognition, sentiment analysis, word frequencies- word clouds)
• Exploration and reflection on the range of online tools available and how to use them as a humanities scholar.
Each module has a sub-task.

**Initial competences**

**Final competences**

1  Have insight into the methodology of history.

2  Have basic knowledge of the diverse sources and scientific literature used in historical research and the specialist skills requisite to reading and interpreting sources.

3  Have the ability to critically apply quantitative and qualitative methods and techniques.

4  Have the ability to indicate the most appropriate types of sources relative to a specific historical research question.

5  Have the ability to use scientific criteria to substantiate a heuristic method and historical bibliographical research.

6  Be conscious of the importance of scientific integrity.

7  Have the ability to closely follow historiographical evolutions, and to further develop one's own skills.

8  To be able to report on pending scientific discussions in historiography with a critical apparatus.

9  Have the ability to communicate the results of historical research with both experts and laypersons, either orally or in writing.

10  Have insight into how related human and social sciences function.

11  With an understanding of the principles and algorithms of digital search environments and their impact on search results, choose an appropriate search strategy, use it responsibly and evaluate it critically.

12  Be able to apply the principles of digital source criticism to the own research objects in an independent and scientific manner.

13  Be able to compare, select, use responsibly and critically evaluate digital formats to create own digital versions of analogue or digital research objects.

14  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.--- Klik om te editeren ---

15  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.

16  Be able to compare, select, use responsibly and critically evaluate digital tools to improve the quality of digital research objects or datasets.

17  Be able to digitally enrich research objects with information such as annotations or metadata.

18  Recognise repetitive tasks that can be automated and find and use digital applications to perform that task.

19  Be able to compare, select, use responsibly and critically evaluate digital analysis methods to perform analyses (content, network, relational, spatial, structural or stylistic).

20  Be able to compare, select, use responsibly and critically evaluate digital visualisation methods in order to carry out analyses or present research results.

21  Use digital methods for project collaboration in one or more phases of a research process.

22  Be familiar with the basic concepts and the inter- and transdisciplinary possibilities of Digital Humanities.

**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, Independent work

**Extra information on the teaching methods**

Introductory lectures and practical exercises

**Learning materials and price**

Reader, presentations (on Ufora) and software

**References**

Wilke, C. O. (2019). Fundamentals of data visualization: a primer on making informative and compelling figures. O'Reilly Media.

Verborgh, R., & De Wilde, M. (2013). Using OpenRefine : the essential OpenRefine guide that takes you from data analysis and error fixing to linking your dataset to the Web. 1 New ed. Birmingham: Packt Publishing Limited.

D'haeninck, T., Nico, R., & Verbruggen, C. (2015). Visualizing longitudinal data: rooted cosmopolitans in the low countries, 1850-1914. In First Conference on Biographical Data in a Digital World 2015 (Vol. 1399, pp. 116-121). CEUR WS.

Romein, C. Annemieke, Max Kemman, Julie M. Birkholz, James Baker, Michel De Gruijter, Albert MeroñoPeñuela, Thorsten Ries, Ruben Ros, and Stefania Scagliola. "State of the field: digital history." History 105, no. 365 (2020): 291-312.

**Course content-related study coaching**

Availability of professors and/or co-lecturer for supervision of specific student 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**

Participation, Presentation, Assignment

**Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible

**Calculation of the examination mark**

100% non-periodic evaluation.
In order to pass, students must have completed all sub-assignments (data cleaning, GIS, SNA, and review of data visualization) and must have passed at least the GIS module.

**Facilities for Working Students**

1. Possible exemption from educational activities requiring student attendance, a task is imposed in substitution.
2. The examination cannot be rescheduled.
3. Feedback can be given by email, or during an appointment during office hours.
For more information concerning flexible learning: contact the monitoring service of the faculty of Arts and philosophy