

Mapping tools

Lecturer

Geoffrey Grulois (Coordinator)

Course mnemonic

URBA-P9010

ECTS credits

2 credits

Language(s) of instruction

English and French

Course period

First term

Campus

Flagey

Course content

This course begins with an introduction to Geographic Information Systems (GIS), utilizing the open-source QGIS software, along with foundational concepts in mapping and geospatial data processing. Students will explore a variety of geospatial data sources, with a focus on Brussels, as well as additional Belgian and international datasets.

The course will cover geodata processing and mapping techniques, enabling students to create customized maps and other visualizations (e.g., cross-sections, charts). Through hands-on practice, students will develop the skills needed to produce accurate and informative graphical representations of spatial data.

Objectives (and/or specific learning outcomes)

By the end of this course, students will be proficient in using GIS software to create thematic maps, perform spatial analysis, and process geospatial data. Key competencies gained will include:

- > *Understanding data and effectively transforming data (e.g., normalizing data per capita, percentages, area, etc.).*
- > *Creating maps that clearly and accurately convey complex information.*
- > *Developing advanced graphic skills to design maps where key information is prominent, and thoughtful choices of representation, color schemes, and design elements enhance readability and interpretation.*

These skills will prepare students to communicate spatial information effectively in urban planning / urbanism.

Pre-requisites and co-requisites

Required knowledge and skills

None, except basic computer skills.

Teaching method and learning activities

The course primarily emphasizes practical, hands-on learning, encouraging students to experiment and develop their ability to independently find information and resources online. Each session will begin with a brief theoretical introduction (15-20 minutes) to provide key concepts, followed by extensive practical work.

The course is closely integrated with the Urbanism Studio (Atelier d'Urbanisme), allowing students to enhance their studio projects by applying geographical analysis techniques.

Contribution to the teaching profile

This course enhances students' ability to understand and describe a territory through various mapping techniques. Gaining a deep spatial understanding of a territory is an essential step in the development of urban projects.

Ce cours améliore la capacité des étudiants à comprendre et à décrire un territoire à l'aide de différentes techniques de cartographie. L'acquisition d'une compréhension spatiale approfondie d'un territoire est une étape essentielle dans le développement de projets urbains.

References, bibliography and recommended reading

Monmonier, Mark. *How to Lie with Maps*. Chicago, IL: University of Chicago Press, 2018. <https://press.uchicago.edu/ucp/books/book/chicago/H/bo27400568.html>.

Kollektiv Orangotango, éd. *This Is Not an Atlas: A Global Collection of Counter-Cartographies*. First edition. Social and Cultural Geography, Volume 26. Bielefeld: transcript, 2018.

Labo XX+I. *L'urbanisation du 20e siècle dans et autour de Bruxelles Exploration de la zone sur base de douze questions urbaines*. Departement Omgeving, avec Perspective.brussels, Bouwmeester Maitre Architecte, Team Vlaams Bouwmeester. Bruxelles, 2021.

Course notes

Université virtuelle

Other information

Place(s) of teaching

Flagey

Evaluation method(s)

Personal work

Main language(s) of evaluation

English

Other language(s) of evaluation, if applicable
French

Programmes

Programmes proposing this course at the faculty
of Architecture La Cambre Horta

MS-URDE | Specialized Master in transition urbanism and
regional planning | unit U

Programmes proposing this course at the
Brussels School of Engineering

MS-URDE | Specialized Master in transition urbanism and
regional planning | unit U

