

URB-404 Computational Methods in Urban Studies (CMUS)

Structure of the assessment exercise

Designing sustainable urban policies for the future is a challenging task that (should) require evidence-based knowledge to ensure social acceptability and operational efficiency. Theories from the social sciences and the statistical methods covered in CMUS contribute to these objectives. Students enrolled in the class will be expected to demonstrate their ability to identify relevant issues related to the built environment, select useful methods and data to provide the necessary evidence to address these issues, and formulate sound recommendations based on empirical and contextualized results.

Throughout the semester, students will work in groups of **x** people on an assessment to deliver a research note, which is expected to be between **y** and **z** pages long. The exercise will progress throughout the semester, with the two presentations and the three ateliers marking important deadlines.

1. **Discovery phase** – choose any relevant topic related to urban studies.
2. **Digestion phase** – formulate a research question based on theories covered in class.
Students will have time to receive feedback during atelier 1 (October 13) before midterm presentation evaluation (October 27).
3. **Sedimentation phase** – select appropriate data and methods to analyze the research question.
Students will have time to receive feedback during atelier 2 (November 17).
4. **Consolidation phase** – provide results and create a dialogue with the existing literature.
Students will have time to receive feedback during atelier 3 (December 8) before the end-of-term presentation evaluation (methodological + empirical phases) (December 15).

The final evaluation will be based on the research note, both presentations during the semester, and a personal and critical reflection (2 pages max.) about CMUS (e.g., content or structure of the lectures, articulation of concepts and methods, etc.) to be submitted at the same time. The weights are the following :

- 40% for the research note (collective assessment, deadline : **xxx**).
- 20% for each midterm/end-of-term presentation (individual assessment, total 40%).
- 20% for the personal document (individual assessment).

The combination of collective and individual assessments guarantees both interdisciplinary dialogue and the personal acquisition of learning outcomes. Students should feel free to contact the teaching team during the semester with any question they have about the exercise, whether they are theoretical, methodological, technical, or otherwise.

Some anonymized data from the *Panel Lémanique* project will be made available to students who prefer to use existing quantitative data. The teaching team also welcomes other sources of quantitative (e.g., web scraping or designated surveys) data and qualitative (e.g., interviews) data, as long as a computational method is used in the collection or analysis process. Although the teaching team will use the R programming language during the semester, students are free to use any other software if they prefer. The codes behind the examples demonstrated in class will be made available to students for reproduction purposes.