



## Methods of urban analysis

### Presentation

Spatial analysis is an essential decision-making tool for understanding the issues and challenges facing territories. It is based on two pillars: an "objective" understanding of the realities observed and the "intelligent" restitution of this information to the stakeholders concerned. The aim here is to develop students' knowledge and understanding of all the phases of geographical analysis, as well as its methodological limitations: the appropriate data, the techniques for producing accurate information, the suitable tools for processing this information, and the forms of visual restitution of the message. The class will first discuss what is involved and what is at stake in mastering cartographic tools before focusing on the practical application with the Geographic Information System (GIS). Using GIS will enable students to: familiarize themselves with the software and its capacities/constraints; work on a concrete space-related issue; explore the sources of data and indicators to be used; conduct the data processing and analysis, and choosing the right graphic representations.

### Recommended Prerequisite(s)

Knowledge of Excel is essential, an advanced command (formulas, pivot tables) is a plus. Knowledge of database concepts, GIS and representation tools (cartography, computer graphics) is an advantage.

### In brief

**ECTS credits** : 2.0

**Number of hours** : 18.0

**Teaching term** : Six-monthly

**Teaching activity** : Seminar

**Year** : Fourth year

**Validation** : Final written examination

### Contacts

#### **Responsible(s)**

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## Bibliography

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- \* Denègre J., Salgé F., *Les Systèmes d'Information Géographique*, Que-sais-je ?, 1996.
- \* Bertin J., *Sémiologie graphique. Les diagrammes, les réseaux, les cartes*, 1967.
- \* Brunet R., *La carte, mode d'emploi*, 1987.
- \* Lambert N. et Zanin C., *Manuel de Cartographie, Principes, méthodes, applications*, 2016.
- \* *Guide de sémiologie cartographique*, Insee, 2018.

## Formule pédagogique

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The first, theoretical, session will focus on: territorial analysis, cartography, and geographical data, existing tools. Second session: demonstration of the tools followed by direct handling by the students on a concrete exercise (making a map). Other sessions: preparation of the student groups' study report through advice by /exchanges with the teacher to enable the students to work directly on the: Which question should be answered? What indicators should be used? What data sources should be used? How to process/handle these data? How should the results be represented? Explain the method chosen and analyze the results.