

ENV-443

Spatial decision support systems

Golay François

| Cursus | Sem. | Type |
|--|-------------|-------------|
| Environmental Sciences and Engineering | MA2, MA4 | Opt. |
| Mineur STAS Russie | E | Opt. |
| Urban Planning and Territorial Development minor | E | Obl. |

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|----------------------------|-----------------|
| Language of teaching | English |
| Credits | 3 |
| Session | Summer |
| Semester | Spring |
| Exam | Oral |
| Workload | 90h |
| Weeks | 14 |
| Hours | 3 weekly |
| Courses | 2 weekly |
| Exercises | 1 weekly |
| Number of positions | |

Summary

The course deals with the methods and instruments supporting decision processes in the geographical space. The focus is on multi-criteria decision analysis, with the special requirements carried by space-related scenarios and solutions, and by the participatory processes among numerous stakeholders.

Content

- Situations and cases of decision making in territorial and environmental planning and management
- Spatial decision processes and steps
- Spatial decision support processes and tools
- Multi-criteria decision making (MCDM) and its spatial applications
- Collaborative/group spatial decision-making
- Hands-on exercises of MCDM with GIS
- Cases studies and seminars

Learning Prerequisites**Recommended courses**

Basic knowledge and skills in GIS

Learning Outcomes

By the end of the course, the student must be able to:

- Expound most importance issues of spatial decision making
- Choose relevant methods for spatial decision support
- Apply most important multi-criteria decision analysis processes
- Organize a decision making process involving many stakeholders

Transversal skills

- Make an oral presentation.
- Summarize an article or a technical report.

Teaching methods

Lecture, exercises, seminars

Assessment methods

50% report and presentation

50% oral exam during the exam session

Resources

Ressources en bibliothèque

- [Multicriteria Decision Analysis in Geographic Information Science /Malczewski](#)