ENV-443  
**Spatial decision support systems**

Golay François

<table>
<thead>
<tr>
<th>Cursus</th>
<th>Sem.</th>
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<tbody>
<tr>
<td>Mineur STAS Russie</td>
<td>E</td>
<td>Opt.</td>
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<tr>
<td>Mineur en Développement territorial et urbanisme</td>
<td>E</td>
<td>Obl.</td>
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<tr>
<td>Sciences et ingénierie de l'environnement</td>
<td>MA2, MA4</td>
<td>Opt.</td>
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**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
33 % spot written check during the semester
33 % continuous control during the semester (seminar synthesis)
33 % written test (60 min) during the exam session

Resources
Ressources en bibliothèque

• Multicriteria Decision Analysis in Geographic Information Science /Malczewski