Level: Master

Course title: GIS and Remote Sensing for Disaster Risk Management

Status: Elective

ECTS: 5

Requirements: None

Learning objectives
Implementation of Geographic Information System and Remote Sensing for Disaster Risk Management.

Learning outcomes
Students will be able to select information sources related to relevant disaster risk indicators, to extract basic input data and establish spatial databases. Students will be able to design and develop multilayer spatial entities, to create spatial queries and visualise output. In addition, students will be able to create and manipulate basic 3D spatial entities.

Syllabus
Theoretical instruction
- Relevant indicators prioritization and selection
- Indicators
- Data and information sources (satellite images, scanned maps, urban planning documents, DEMs, remote sensing input, sensor web input data, in-situ data acquisition, ...)
- Different data formats
- Spatial database design and development
- Geo-referenced data
- Attribute data
- Sensor web data
- Multilayered spatial entities' design and development
- Spatial queries development and reporting
- 3D scene and spatial-temporal model development

Practical instruction:
Practical exercises. Research related activities. Computer-based exercises.

Weekly teaching load				Other:
Lectures: 2	Exercises: 2	Other forms of teaching:	Student research:	