



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Sistemi Informativi Territoriali

2021-2-E3201Q090-E3201Q087M

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#### Aims

At the end of this teaching the student will have to:

- know the basic principles of SIT
- know the main SIT data models and their basic applications

Ability to apply knowledge and understanding

- be able to create a spatial database

At the end of the course, the student will be able to make a judgment:

- on the correct application of the knowledge acquired during the course for the management of spatial data
- on the quality and accuracy of spatial data;

At the end of the course the student must know:

- organising and managing spatial data
- be able to create an operational flow for the acquisition, management, processing and representation of spatial data.

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## **Contents**

The course regards the principles of Geomatic and in particular application of Geographic Information Systems to environmental geology

## **Detailed program**

### General Objectives

The course aims to provide students with the main knowledge base and methodology underlying the GIS databases. Jointly presenting the main fields of application in environmental and land.

### Contents of lectures

Definition of SIT, illustrations of the application in the fields of environmental and land. Elements of basic cartography; characterization of geographic information. Definition of spatial data models. Mode of representation of spatial data through computer systems. Hardware and software architecture and presentation of the main features of a GIS. Definition of database, model database, relationships between databases and GIS. Method of gathering data, creating spatial data base. Classification and main applications of the analytical capabilities of a GIS and GIS mapping ratio, mode of production and representation of thematic maps. Basic concepts and definition of data quality, metadata definition and functionality.

Contents of the workshops / tutorials with practical exercises using industry-leading commercial software applications with on case studies.

## **Prerequisites**

Physical geography

## **Teaching form**

Lessons, 4 credits

- Laboratory experiences, 2 credits

## **Textbook and teaching resource**

### **Semester**

first

### **Assessment method**

Practical test on laboratory activities

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### **Office hours**

By appointment

