

Syllabus

Course Description

Course Title	Informatics
Course Code	40215
Course Title Additional	
Scientific-Disciplinary Sector	NN
Language	Italian
Degree Course	Bachelor in Sustainable Agriculture and Forestry in Mountain Environments
Other Degree Courses (Loaned)	
Lecturers	dr. Michele Torresani, Michele.Torresani@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/37414
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	1
Teaching Hours	10
Lab Hours	0
Individual Study Hours	15
Planned Office Hours	3
Contents Summary	1. Basic concepts of informatics applied to geographic information systems. 2. Introduction to spatial data, digital maps, and basic GIS tools. 3. Fundamentals of data management, georeferencing, and visualization of geographic information.
Course Topics	Programming Fundamentals: Algorithms, data types, functions, R programming and basic problem solving techniques. Data Management and Analysis: Data structures, databases, data processing, analysis and visualization.

	GIS and Spatial Data: Introduction to GIS, vector and raster data, spatial analysis and basic geospatial data processing.
Keywords	Programming · Data Analysis · GIS · Spatial Data
Recommended Prerequisites	
Propaedeutic Courses	No
Teaching Format	Practical activity
Mandatory Attendance	No
Specific Educational Objectives and Learning Outcomes	The course aims to provide students with basic informatics skills and an introductory understanding of digital tools for data management, with brief reference to GIS applications.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	Students will present projects based on the theoretical and practical concepts introduced during the lectures
Evaluation Criteria	Quality of the project implementation (accuracy, completeness, and technical soundness) Innovation and originality of the proposed project Consistency and coherence of the project with the topics covered during the course
Required Readings	NA
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Quality education, Life on land, Climate action, Sustainable cities and communities