SYLLABUS DEL CORSO

Statistica Spaziale e Ambientale

1920-3-E4102B071

Learning objectives

The course aims at providing students with a set of methodologies to deal with spatial and environmental data.

Contents

Geocoding. An introduction to cartography. Explorative spatial data analysis; spatial interpolation. Semiparametric statistical models for environmental data analysis. Estimation of the background level. Computer sessions using the R software for the analysis of environmental spatial data.

Detailed program

a) Geocoding and an introduction to cartography. GIS. Raster and vector data. Map smoothing for continuous and lattice data

b) Estimation of the background level

c) WLS, B-spline and additive models

d) Laboratory sessions in R.

Prerequisites

Elements of Multivariate Statistics, Inference and Informatics.

Teaching methods

Class lessons and lab sessions in R.

Assessment methods

Lab assesment and oral examination .

The overall mark is obtained by averaging the marks of the two parts.

Textbooks and Reading Materials

Reading material and software codes will be made available through the eLearning web page of the course.

Semester

First term of the second semester.

Teaching language

Italian.