SYLLABUS DEL CORSO

Statistica Ambientale M

2526-2-F8204B040

Learning objectives

Providing an overview of the statistical methods (e.g. Environmental sampling, Extreme value theory and Geostatistics) used in the framework of environmental sustainability (e.g. for modeling biological population dynamics, biodiversity, extreme values and spatial correlations), paying particular attention to scientific, social, economic and ethical issues.

Contents

Ecological statistics.

Environmental sampling.

Extreme value theory.

Models for spatial correlations.

Detailed program

Introduction to Ecological statistics.

Environmental sampling and density estimation (line transect, point transect, capture-recapture).

Extreme value theory (classical theory; threshold models; asymptotic distributions of extreme values).

Introduction to models for spatial correlation and optimal prediction in the case of environmental data.

Prerequisites

Knowledge of the topics covered by "Statistics II".

Teaching methods

Fourteen three-hour class lectures.

Assessment methods

The exam is oral and aims to evaluate knowledge and understanding. Examples of questions for the exam and in-depth topics are available on the e-learning platform.

Textbooks and Reading Materials

Lecture notes available on the e-learning platform.

Semester

The course is scheduled in the first semester.

Teaching language

Italian.

Sustainable Development Goals

SUSTAINABLE CITIES AND COMMUNITIES