UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Use of Aerial Drones for Monitoring Coastal and Nearshore Environments: from Acquisition Procedures to Data Processing

2425-128R-MTM.08

Title

Use of Unmanned Aerial Vehicles (UAVs) for monitoring coastal and nearshore environments: from acquisition procedures to data processing

Teacher(s)

Dr. Luca Fallati

Language

English

Short description

The course aims to provide in-depth knowledge on using various types of aerial drones (multi-rotor and fixed-wing) for monitoring coastal marine areas. Students will learn how to plan overflights based on environmental characteristics and monitoring objectives. They will also use flight simulation software. For data processing, they will work with image datasets collected in different coastal environments (tropical and temperate) and use innovative photogrammetry techniques to produce high-resolution digital terrain models and orthomosaics. These

outputs will be further analyzed using image analysis algorithms for automated classification and zonation. At the end of the course, students will present a report showcasing their achieved results.

CFU / Hours

1 CFU / 8 Hours

Teaching period

June

Sustainable Development Goals

CLIMATE ACTION | LIFE BELOW WATER