

413SM - APPLIED GEOMORPHOLOGY

Aims

The student will be able to draw, read and provide interpretations of geomorphological maps. The student will also increase his/her knowledge of the area of interests and applications of geomorphology. He/she will learn the principles and methods of geomorphological mapping and he will learn the fundamentals of the creation of maps and reports for the territorial management and for the environmental impact assessment. The student will increase the ability to select, evaluate and protect natural geomorphological sites. (geosites).

Prerequisites

Not requested

Contents

Definitions of applied geomorphology, territory, environment, sustainability. Methods in Applied geomorphology. Problems related to the erosion and alteration processes, measures and rates, Surface hazardous processes (meteorisation, geomorphological dynamics, risk mitigation), the Anthropocene and geomorphic processes from the past to nowadays, risk and geomorphological risk, geomorphological processes in anthropized areas, karst forms and hazards, fluvial dynamics, sampling methods, gravitational phenomena and methods of observation, avalanches, geomorphological cartography, impact of sea level variations on coastlines, UAV and exercises, Structure from Motion with exercises, contribution of geomorphology in assessments of feasibility and impact of infrastructural interventions and application problems of the Anthropocene.

Teaching Format

Lectures and exercises

Assessment

Oral exam. The exam consists of:

- one question about the applications of photogrammetry;
- one question about geomorphological mapping;
- 2-4 open or close questions about all the programme of the course.

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Obiettivi formativi

Lo studente sarà in grado di costruire, leggere ed interpretare le carte geomorfologiche. Avrà inoltre conoscenza dei campi di applicazione della geomorfologia.

Apprenderà principi e metodi di rilevamento e cartografia geomorfologici per la realizzazione di un elaborato di base per la gestione territoriale e per la valutazione dell'impatto ambientale.

Avrà capacità di selezionare, valutare e proteggere i beni naturali di tipo geomorfologico (geositi).

Metodi didattici

Lezioni frontali, esercitazioni ed escursioni