UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Geomorfologia

2122-3-E3401Q057

Aims

The student who successfully completes the course will get a broad knowledge of the scope and main areas of Geomorphology, a solid knowledge for describing, characterizing, and interpreting landscape features of endogenous and exogenous origin, including the recognition of basic geomorphologic features, their development, and their spatial distribution (with ability to classify and describe landforms in a variety of environmental settings). Furthermore, he/she will obtain the ability to distinguish active, inactive, quiescent, and relict geomorphologic features. Basic criteria for applying geochronological tools (relative- and absolute- dating of landform features) and elementary techniques of photointerpretation will also be acquired.

Contents

Principles of geomorphology: basic concepts for the study of landforms with respect to processes that produce and modify them at a variety of scale in space and time. Endogenic landforms originated by processes acting within the Earth; exogenic landforms originated by processes acting at the earth-atmosphere-water interface. Geological, climatic and other factors conditioning landforms origin and their evolution. Spatial and temporal scales in geomorphology; basic principles of geochronology for defining relative- and absolute- age of landform and surficial deposits. Structural geomorphology. Landforms originated by weathering and slope processes; mass wasting; soils and their origin; soil erosion; paleosoils and their relevance for landscape analysis. Karst landforms and speleogenesis. Landforms of fluvial, glacial, periglacial, eolic and marine origin. Models of landscape evolution. Basic principles of photointerpretation. Geomorphological maps and their structure.

Detailed program

Introduction to Geomorphology

Processes and forms of exogenous origin.

Exercises

Cartography: legend and structure of geomorphological maps; stages of implementation; examples of geomorphological maps. Characteristics of stereoscopic aerial photographs and hints of photointerpretation for the recognition of geomorphological elements.

Field activity

Ground exits are planned for on-site lessons relating to direct knowledge of some geomorphological peculiarities of the territory.

Prerequisites

None

Teaching form

The course includes lectures, laboratory and practical ground exercises (6 CFU)

Part of the frontal hours are carried out on the ground

If the teaching is given in a mixed or remote mode, the necessary variations with respect to what was previously stated may be introduced, in order to respect the program envisaged and reported in the syllabus.

Textbook and teaching resource

The lessons will be uploaded to the elerning.unimib.it website and will be available to students. There will also be links to specific in-depth sites and, if present, videos.

Books:

- Castiglioni G.B., 1979: *Geomorfologia*. UTET, Torino.

- Selby M.J., 1989: *Earth's Changing Surface*. Clarendon Press, Oxford.

- Summerfield M.A., 1991: *Global Geomorphology*. Longman.

- Bartolini C. Peccerillo A., 2002: *I fattori geologici delle forme del rilievo.* Pitagora, Bologna.

- Ciccacci S., 2010, Le forme del rilievo. Atlante illustrato di Geomorfologia. Mondadori Università.

- NASA – *Geomorphology from space*. Online: http://disc.gsfc.nasa.gov/geomorphology/

- D'Orefice, Graciotti, 2021, Rilevamento Geomorfologico e Cartografia. Flacovio Editore.

Semester

Seconda Semestre (March - June)

Assessment method

The exam consists of an oral test during which the student must demonstrate knowledge of the basic concepts and topics covered during the course.

Office hours

Write to the teacher fo define the colloquium (valter.maggi@unimib.it)