UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Field Geology and Mapping

2425-2-E3401Q036

Aims

Recognition of geometry and compositional characters of geological bodies, and their description in the field.

Contents

Introduction to field geology and mapping.

Detailed program

Field geology techniques: Description and classification of sedimentary, igneous and metamorphic rocks in the field. Quaternary deposits. Compass and basic stereonet techniques. Plotting contacts on base maps. Stratigraphic polarity in deformed successions. Stratimetric problems. Data collection and making standard geological maps. Stratigraphic logs and geological cross-sections from field data. Preparing geologic reports.
Classroom exercises: resolution of stratimetry problems, drawing of interpretive geological maps and cross-sections, application of stereographic projection techniques.
Field work: Four daily field excursions aimed at the recognition and mapping of sedimentary covers and crystalline basements.
Geological mapping I: Six full days of geological field survey, during which small groups of students (ca 15 students each teacher) will apply the basic field geology techniques to produce geological maps, cross-sections and illustratory notes in geologically simple areas of the Alps-Apennines system.

Prerequisites

Having obtained 1 cfu relating to the Safety Course in the field

Teaching form

20 two-hour lectures, in person, Delivered Didactics
6 two-hour practical classes, in person, Interactive Teaching
4 six-hour field activities, in person, Interactive Teaching
1 geological field survey, forty-eight-hour (six-full-day), in person, Interactive Teaching

Textbook and teaching resource

Notes provided by the lecturers

Semester

second semester

Assessment method

Written examination + compulsory oral examination + written reports also including the written report of the six-days geologic field work. There are no *in itinere* tests.
Written test (duration 1 hour): stereographic projections exercise; tracing of geological limits. During the written test, the ability to draw a geological limit on a topographical map of complex landscapes, and the ability to solve simple geometric problems using stereographic projection are evaluated. Failure to pass the written exam will not allow admission to the oral exam.
Oral exam (to be taken on the same day as the written exam): interview on the topics covered in class and during daily field works, with open questions on geological surveying techniques; measuring planes and lines using compass. During the oral test, the knowledge of the theoretical topics covered during the course and the ability to describe the geological situations observed in the field are assessed, also using hand specimens (provided by the teacher) and the student's field notes. If the oral test is not passed, the written test must be repeated.
Reports on the four day field work: to be carried out according to the scheme illustrated in class (to be uploaded in pdf format to the course eLearning page). The ability to briefly and exhaustively illustrate the observations made on the field according to the conventions in use will be evaluated.
Report on Geological Field Survey I: to be uploaded in pdf format on the course eLearning page. The ability to briefly and exhaustively illustrate the observations made on the field according to the conventions in use, and the coherence of the report with the geological maps presented will be evaluated.

Office hours

Website: www.disat.unimib.it in teaching area you can find information about teachers cv, telephone number, University room or other place of work, office hours and e-mail.

Sustainable Development Goals

QUALITY EDUCATION