



GEO1331 Geomorphology

[30h+30h exercises] 5 credits

This course is not taught in 2005-2006

Language: French

Level: First cycle

Aims

Knowledge:

To understand the interaction between morphology, the materials and the exogeneous processes on slopes.

Skills:

To acquire experience in field work, sampling, sample analysis (A level).

To acquire experience in interpretation of material expression and the processes in the scenery morphology from maps and aerial pictures (B level).

To be capable of analyzing and interpreting the results of a field campaign.

Main themes

Prerequisites:

The course uses the following material:

The main lines of atmospheric circulation

The endogeneous processes

The different types of rocks

Elementary notion of exogeneous processes: alteration, hydrological cycle, terrain slides, erosion, soils and ecosystems.

Lectures: (8 X 2hrs)

1: introduction (preparation time: 2hrs)

2: Slope processes and its materials (preparation time: 3hrs)

3: Weathering (preparation time: 3hrs)

4: The relation between morphology, soils and surfaces (preparation time: 3hrs)

5: Water erosion (preparation time: 3hrs)

6: Land slides (preparation time: 3 hrs)

7: Slope development as a result of denudation (preparation time: 3hrs)

8: Questions and answers (preparation time: 2hrs)

Practical work:

The sessions are organised in 8 sessions of 3 hours; a day of field work in one group of students under the supervision of an assistant.

PW1/2: Geomorphological analysis from topographic maps

PW3: Use of digital terrain models (DTM) in geomorphology

PW4: Field preparation

PW5: Field work

PW6: Analysis of field data

PW7&8: Geomorphological analysis from aerial photos

Personnal work

Literature review (16 hrs)

Field analysis report (20 hrs)

With supervision, the possibility of consultations (during the weeks before the deadline dates).

Notions acquired:

Bibliographic research

Capacity to analyse the results of sampling and to describe them clearly in a report.