
COURSE: Applied Geomorphology

ACADEMIC YEAR: 2017-2018

TYPE OF EDUCATIONAL ACTIVITY:

TEACHER: Salvatore Ivo Giano

e-mail: ivo.giano@unibas.it;website: scienze.unibas.it/site/home.html.

phone: 0971-205842

mobile (optional):

Language: **Italian**

ECTS: (lessons e
tutorials/practice) **6**n. of hours: (lessons e
tutorials/practice) **56**Campus: **Potenza**
Dept./School: **Dipartimento di**
Scienze
Program:

Semester : **II**
(date) **march 5 to june**
15-30

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

- *The course will provide at students the application tools necessary in the geomorphological analysis of the landscape and in the resolution of the related issues.*
 - *Student will be able to use the geomorphological tools for characterization and management of the landscape and will be able to provide answers useful in the mitigation of hazard. It will be also develops communicative and relational skills in the presentation of the results.*
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PRE-REQUIREMENTSPassing Exam of Physical Geography and Geomorphology

SYLLABUS

The role of Geomorphology in the spatial planning.

Environmental hazard and cartography of the geomorphological risk.

Inventory of the risk factors, mapping of the instability factors, and learning of the predictive thematic cartography.

Soil erosion and slope dynamics.

Soil erosion related to geomorphology.

Soil conservation using of hydraulic-forestry works and natural accommodations.

Classification of landslides and related landforms.

Landslides and landscape morphological evolution.

Survey and mapping of landslides.

Planning of researches in a landslide area and direct/indirect arrangement works.

Census of landslides and realization of thematic maps.

Deep-Seated Gravitational Slope Deformation (DSGSD): definition and typologies.

The role of DSGSD in the slope dynamics.

Analysis of the ridge-slope-bottom valley geomorphic system.

Analysis and classification of sinkholes.

Genesis and evolution of sinkholes.

Sinkholes and related risk in urban area.

Fluvial system: monitoring, management issue and arrangement works using natural approaches.

Coastal system: management issue and arrangement works using natural approaches.

Seismic risks and realization of geomorphological projects in the first level seismic microzonation.

Aerophoto interpretation with recognition and mapping of landforms.

Production of thematic maps with open source GIS using DEMs.

Aspect map, slope map, lithological map, landslide map, flooding map, etc.

TEACHING METHODS

Lectures – Lab. Activities – Field trip

EVALUATION METHODS

Final oral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- M. PANIZZA - Geomorfologia Applicata, La Nuova Italia Scientifica, Roma.
 - F. DRAMIS & C. BISI - Cartografia Geomorfologica, Pitagora Editrice, Bologna.
 - A. VALLARIO – Frane e Territorio, Liguori Editore
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INTERACTION WITH STUDENTS

Tutoring students will be on Wednesday, or by previous appointment in other days of the week.

EXAMINATION SESSIONS (FORECAST)¹

March 14; May 16; June 20; July 12; October 3; November 14; December 14

SEMINARS BY EXTERNAL EXPERTS YES X NO

FURTHER INFORMATION

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates.