Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: Environmental Geology

TEACHER: Filomena Canora

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Language Italian

ECTS: 6	n. of hours: 54	Academic year: 2014/2015	Campus: Potenza	Semester: Ist

TOPICS

Earth surface processes and dynamics. Natural hazards. Land instability phenomena. Hydrogeological Risk. Slope Instability and dynamics of landslides. Landslide hazard and risk. Aquifer pollution vulnerability and risk. Karst hazard and risk. Land degradation. Sensitivity to desertification. Coastal vulnerability and erosion risk.

TEACHING METHODS

x Theoretical lessons
x Tutorials in classroom
x Technical visits

TEXTBOOKS

Lecture Notes and Teaching handouts.
Pipkin B.W., Trent D.D., Hazlett R., GEOLOGIA AMBIENTALE, Piccin, 2005.
Martinis B., GEOLOGIA AMBIENTALE, UTET, Torino, 2000.
Gisotti G. e Zarlenga F., GEOLOGIA AMBIENTALE. PRINCIPI E METODI, Dario Flaccovio, Palermo, 2004.
Glade T., Anderson G.M., Crozier J.M. LANDSLIDE HAZARD AND RISK, Wiley, 2005
Goudie A., THE HUMAN IMPACT ON THE NATURAL ENVIRONMENT, Blackwell Publishing, Oxford, 2005.
Civita M., IDROGEOLOGIA APPLICATA E AMBIENTALE. Casa Editrice Ambrosiana, 2005.

ON-LINE EDUCATIONAL MATERIAL

web address:

LEARNING OUTCOMES

Development and understanding of the ability to recognize, classify and analyze the peculiar problems of environmental nature, and in particular the hydrogeological risk and others processes related to the phenomena of territory instability. Acquisition of specific skills in order to interact with similar professional figures that operate with different skills in a variety of phases related to the environmental interventions connected to the territory and the design of the works; to the environmental phenomena connected to the territory management and planning and the definition of mitigation actions.

REQUIREMENTS No requirement

EVALUATION METHODS

x Written examination
x Oral examination

DETAILED CONTENT

Earth surface processes and dynamics; natural and hydrogeological hazards. Natural and anthropogenic: systems, processes phenomena, system dynamics and system identification; complexity and uncertainties. Protection of the territory from hydrogeological risk. Slope Instability and dynamics of landslides. Landslide Hazard, Vulnerability, Exposure and Risk Assessment. Measurements and monitoring finalized to the prediction, prevention and mitigation of landslide risk. Aquifer Hydrodynamics. Groundwater Pollution. Intrinsic and specific vulnerability of groundwater and risk pollution. Processes in Karst Systems. Natural and anthropogenic caves instability. The sinkholes. Karst hazard and risk assessment. Soil erosion and Susceptibility to desertification. Coastal Dynamics: erosion, coastal vulnerability and sensitivity. Coastlines Instability. Environmental Thematic and Risk Cartography.

SEMINARS BY EXTERNAL EXPERTS YES x NO □

FURTHER INFORMATION