

## Anno Accademico 2016/2017

APPLIED GEOLOGY TO TERRITORIAL PLANNING	
Enrollment year	2015/2016
Academic year	2016/2017
Regulations	DM270
Academic discipline	GEO/05 (APPLIED GEOLOGY)
Department	DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
Course	APPLIED GEOLOGICAL SCIENCES
Curriculum	GEOSCIENZE E GEORISORSE
Year of study	2°
Period	1st semester (03/10/2016 - 20/01/2017)
ECTS	9
Lesson hours	92 lesson hours
Language	ITALIAN
Activity type	ORAL TEST
Teacher	MEISINA CLAUDIA (titolare) - 9 ECTS
Prerequisites	=
Learning outcomes	=Knowledge of the basic principles of land use planning especially in areas subjected to high geological risks (landslide, subsidence and seismicity). Ability to assess the trigger conditions and the evolution of different landslides, in particular by assessing the hazard and by designing mitigation works. Ability to carry out a geological study in support of land use planning instruments.
Course contents	The geological risk: definitions and basic concepts (hazard, elements at risk, vulnerability). Landslide risk. Classification and characteristics of landslides. Deep seated gravitational slope deformations. Shallow landslides. Predisposing and triggering factors. Different methodologies for the landslide hazard and risk assessment: empirical, heuristic, statistical deterministic approaches. Monitoring and mitigation of landslides. Seismic risk : the seismic microzonation, site effects,

	coseismic phenomena (landslides and liquefaction). Subsidence: causes and typology of land subsidence (aquifer-system compaction, drainage of organic soils, underground mining, shrinkage of clay soils, sinkholes), land subsidence mapping and monitoring. Land planning at regional, provincial, municipal scale (landscape plans, municipal urban plans). Technical specifications for geological studies in support of planning instruments.
Teaching methods	=lectures, laboratory exercises and field surveys.
Reccomended or required readings	=the textbooks will be announced at the beginning of the course
Assessment methods	=Final exam: written report on one studied case and oral exam focusing on the topics treated during the course
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Sustainable development goals - Agenda 2030	\$Ibl_legenda_sviluppo_sostenibile_