



APPLIED GEOMORPHOLOGY AND GEOAMBIENTAL IMPACTS

Enrollment year	2019/2020
Academic year	2019/2020
Regulations	DM270
Academic discipline	GEO/04 (PHYSICAL GEOGRAPHY AND GEOMORPHOLOGY)
Department	DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
Course	APPLIED GEOLOGICAL SCIENCES
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	1st semester (01/10/2019 - 15/01/2020)
ECTS	6
Lesson hours	62 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	PELLEGRINI LUISA (titolare) - 6 ECTS
Prerequisites	Knowledge of Geomorphology and Geology. In particular, knowledge about landforms and geomorphological processes. Knowledge of geology and lithology and structural geology are also useful.
Learning outcomes	Knowledge of relationships between man and environment and of main geomorphological hazards related to environmental planning and management. Areas analysis skill both in qualitative and quantitative terms. Interaction with other sciences skill in order to contribute to knowledge of terrain and its management. Identification on field skill of landscape elements and processes and drawing skill geomorphologic and geo-environmental maps.
Course contents	Relationships between the structural-geological environment and the landscape. Geomorphology of coastal plain, plain and plateau, dome, folded and block mountains. Tectonic geomorphology. Relationships between climatic conditions and changes and geomorphological

	<p>dynamics. Geomorphological hazard, vulnerability and risk in mountain, fluvial and coastal environment. Geomorphological mapping and applied geomorphological mapping: principles and field survey techniques. Geologic and geomorphological heritage. Geosites and geo-morphosites: laws and regulations, description, assessment, surveying and mapping. Preservation and conservation of the landscape</p> <p>Geologic-geomorphologic analysis of specific region to define the geoenvironmental features. Reponse of the natural system to human intervention. National and regional regulations related to V.I.A. (environmental impact assessment), and applications. Geological aspects of environmental impact studies.</p>
Teaching methods	<p>The course includes lectures, laboratories and field work. Lectures are based on slides presentations, which are available for the students on the Moodle platform KIRO. During the laboratory activities students are guided in the analysis, also in applied key, of the geomorphological maps and in the GIS analysis of channel changes. A field laboratory will aim to analyze river channels and a field trip will be made to visit a gravel/sand quarry or a rubbish dump or a geo(morho)sites.</p>
Reccomended or required readings	<p>Allison R.J., 2002. Applied Geomorphology. John Wiley & Sons. LTD. New York</p> <p>Bartolini Carlo & Peccerillo Angelo, 2002. I fattori geologici delle forme del rilievo. Pitagora Ed., Bologna</p> <p>Burbank D. W. & Anderson R. S., 2011. Tectonic geomorphology. Wiley-Blackwell</p> <p>D'Orefice M. e Graciotti R., 2015. Rilevamento Geomorfologico e Cartografia. Realizzazione – Lettura - Interpretazione. Dario Flaccovio Editore, Palermo</p> <p>Marchetti Mauro, 2000. Geomorfologia fluviale. Pitagora Ed. Bologna</p> <p>Brierley G.J. & Fryirs K.I., 2005. Geomorphology and river management. Blackwell Science Ltd.</p> <p>Panizza Mario, 2005. Manuale di Geomorfologia applicata. Franco Angeli Ed., Milano</p> <p>Panizza Mario, 1996. Environmental Geomorphology. Elsevier.</p> <p>Material provided by teacher during the course</p>
Assessment methods	<p>The evaluation will be carried out through a final oral exam to verify the achievement of the educational objectives of the course. The contents of the lectures and laboratories will be the subject of the examination.</p>
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Sustainable development goals - Agenda 2030	<p>\$lbl legenda sviluppo sostenibile</p>