

Main course information	
Academic subject	Environmental Geology and Geomorphology Laboratory
Degree course	Bachelor's Degree in Nature Sciences
Classe di laurea	L/32
ECTS credits (CFU)	2
Compulsory attendance	Strongly recommended
Teaching language	Italian
Accademic Year	2019/2020

Docente responsabile	
Name & SURNAME	Massimo Angelo Caldara
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Tutorial time/day	Monday 11 am-1pm at the studio located on the second floor of the Earth Sciences building, University campus

Course details	Study area	SSD code	Type of class
	exam with mark	GEO/04	workshop

Teaching schedule	Year	Semester
	III	II

Modalità erogazione	CFU/ECTS	Lessons (hours)	CFU/ECTS lab	Lab hours	CFU/ECTS tutorial/workshop	Tutorial/workshop hours	CFU/ECTS field trip	Field trip Hours
	0	0	2	30	0	0	0	0

Time management	Total hours	Teaching hours	Self-study hours
	50	30	20

Academic Calendar	First lesson	Final lesson
	2 marzo 2020	12 giugno 2020

Syllabus	
Course entry requirements	A good knowledge of physical geography and geology
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	
<i>Knowledge and understanding</i>	The student will have to learn and understand the importance of geosites in naturalistic conservation and dissemination The student must be able to read and interpret topographic and thematic (geomorphological) maps and satellite images
<i>Applying knowledge and understanding</i>	The student have to provide, in a multidisciplinary context, the methodological bases for the study of geomorphology with particular reference to the climatic geomorphology for the understanding of morphogenetic processes and their spatial and temporal variability in function of both natural and man-induced climate changes.
<i>Making informed judgements and choices</i>	The student will have to demonstrate aptitude for the researching of the documents needed to develop a conservation and enhancement project for a geosite. The results will be discussed during the classroom exercises.
<i>Communicating knowledge and understanding</i>	The student will have to demonstrate the ability both to describe the natural and anthropic landscape from various types of cartography and to recognize from satellite images (Google Earth) the forms and processes that originated them by linking them to the climatic conditions of the area. The student will also have to be able to illustrate the results to an audience of non-experts

Capacities to continue learning	Ability to deepen the understanding of complex concepts by interpreting forms and geomorphological processes in a naturalistic context and highlighting the positive or negative aspects that shape the landscape.
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Syllabus	
Course content	<p>Geomorphology Laboratory: recognition of the forms and processes that originated them starting from satellite images (Google Earth) linking them to the climatic conditions of the area.</p> <p>Environmental Geology Laboratory: creation of a geological data sheet with particular reference to the geomorphological ones. Implementation of educational itineraries and related signage for areas of naturalistic value (geosites, biotopes)</p>
Course books/Bibliography	<ol style="list-style-type: none"> <li>1) Bell. F.G., <i>Geologia ambientale. Teoria e pratica</i>. Zanichelli</li> <li>2) Castiglioni G. B. (1989) - <i>Geomorfologia</i>. - UTET.</li> <li>3) Ciccacci S. (2010) - <i>Le forme del rilievo. Atlante illustrato di Geomorfologia</i> . Mondadori-Università La Sapienza, Roma.</li> <li>4) Mcknight T. &amp; Hess D. (2005) - <i>Geografia Fisica. Comprendere il paesaggio</i>. Piccin</li> <li>5) Ricci Lucchi F. <i>La scienza di Gaia. Ambienti e sistemi naturali visti da un geologo</i>. Zanichelli</li> <li>6) Strahler A. N. (1984) - <i>Geografia Fisica</i>. - Piccin</li> </ol>
Notes	All texts are available in the library of the building of Earth Sciences.
Teaching methods	Training in the “isola didattica” on the use of satellite images; and practice on the ground and/or in the classroom for the recognition of geosites with the relative compilation of the Puglia Region card.
Assessment methods (indicate at least the type written, oral, other)	The exam is integrated with the Environmental Geology and Geomorphology Laboratory course. With regard to the theoretic part, it takes place with an oral interview that starts from two papers done by the student. The former related to the compilation of a geosite file and the latter to the discussion of 10 shapes chosen by the candidate on Google Earth.
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are)	<p><b>Knowledge and understanding:</b> The student must demonstrate to know and understand all the contents of the teaching both in the field of geomorphology and in environmental geology.</p> <p><b>Ability to apply knowledge and understanding:</b> The student must be able to apply, in the most appropriate way, the knowledge of morphogenic processes and their spatial and temporal variability in function of both natural and human induced climatic changes. He/she will have to acquire the ability to assess the total risk for the various calamitous phenomena on a global and/or national scale.</p> <p><b>Autonomy of judgment:</b> In addition to ascertaining the acquisition of the notions, it will be evaluated the ability to recognize and discuss the various morphologies from satellite or cartographic images and the ability to highlight the salient features of a geosite that contribute to the constraint of the same. Consequently the student will have to show that he/she is able to find and carefully choose the data derived from the institutional sites useful for the creation of the geosite constraint.</p> <p><b>Communication skills:</b> The mastery of the scientific vocabulary, the clarity and simplicity of exposure, essential elements for teaching and scientific dissemination, will be assessed very positively.</p>
Further information	