



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze della Terra e del Mare
ACADEMIC YEAR	2016/2017
MASTER'S DEGREE (MSC)	GEOLOGICAL SCIENCES AND TECHNOLOGIES
SUBJECT	APPLIED VOLCANOLOGY
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	50569-Discipline mineralogiche, petrografiche e geochimiche
CODE	18149
SCIENTIFIC SECTOR(S)	GEO/08
HEAD PROFESSOR(S)	AIUPPA ALESSANDRO Professore Ordinario Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	6
INDIVIDUAL STUDY (Hrs)	94
COURSE ACTIVITY (Hrs)	56
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	2° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	AIUPPA ALESSANDRO Wednesday 14:30 15:30 via archirafi 36 III piano

DOCENTE: Prof. ALESSANDRO AIUPPA

PREREQUISITES	Volcanology
LEARNING OUTCOMES	<p>The main expected results are:</p> <p>Knowledge of the scientific method of investigation, and of the techniques used in experimental data analysis applied to the understanding geologic processes</p> <p>Comprehension of the behavior and working mechanisms of active volcanoes.</p> <p>Ability to use the specific language of the disciplines.</p> <p>Ability to apply the knowledge gained in the modeling of natural phenomena.</p> <p>Ability to identify strategies to mitigate geological and environmental risks, including the ability to predict the behavior of active volcanoes.</p> <p>Ability to expose the results of geochemical and volcanological studies to a nonexpert public.</p> <p>Ability to emphasize the possible scientific implications of geochemical and volcanological applications</p> <p>Ability to studying and understanding scientific texts in English.</p> <p>Capacity to follow, using the knowledge acquired in the course, specialized seminars in volcanology.</p>
ASSESSMENT METHODS	<p>written test</p> <p>the test will consist in a minimum of 3 open questions + 21 multiple questions.</p> <p>The test will ascertain :</p> <p>(i) the adoption of an appropriate technical language</p> <p>(ii) critical and independent reasoning</p> <p>(iii) ability to make connections between the various topics of the course .</p> <p>The minimum requirements for passing the test are:</p> <p>(i) knowledge of applicative issues and themes in volcanology</p> <p>(ii) ability in quantitative analysis of applied problems in volcanology</p> <p>(iii) fluidity of interconnection between the different course topics</p>
EDUCATIONAL OBJECTIVES	<p>EDUCATIONAL GOALS</p> <p>Objective of the course are to provide a detailed preparation on applied problems and issues in volcanology .</p> <p>In particular , the course aims at:</p> <ul style="list-style-type: none">- The acquisition of an integrated view of applicative problems in volcanology- Understanding of the basic principles of volcanic risk assessment and mitigation- The development of an adequate knowledge on the geochemical analysis techniques used in volcanological context
TEACHING METHODS	frontal lessons; practical numerical exercises on processing of volcanological data; field excursion on an active volcano
SUGGESTED BIBLIOGRAPHY	appunti del corso The Encyclopedia of Volcanoes, 2nd Edition

SYLLABUS

Hrs	Frontal teaching
4	Recall of volcanology
4	volcanic risk ; risk and hazard maps
12	Regional volcanology ; eruptive history and hazard maps of Italian volcanoes
12	Geothermal fields ; geochemical exploration of geothermal areas
8	Volcanoes , climate and the environment : interactions between volcanoes , the atmosphere and the human activities ; environmental impact of volcanic eruptions and degassing
Hrs	Practice
16	Excursion to Stromboli / Etna , with a demonstration of the use of geochemical instrumentations