UNIVERSITÀ DEGLI STUDI DI PALERMO

Characteristics





Educational objectives

The 2nd cycle Degree Course in Georisk and Georesources provides, in the first year, a training path in the fields of technical geology, geotechnics, applied geophysics, applied geochemistry and structural geology (with surveying). It also provides for the limited choice of 3 subjects contained in 3 different pairs of subjects in similar fields (marine geology or cyclostratigraphy, applied geomorphology or morphotectonics, volcanic risk or applied petrography).
On the other hand, the second year is marked by flexibility, offering a wide range of optional subjects in the fields of climatology-paleontology, exploratory geology, geomorphology/GIS, gemology, planetary geology, volcanology-petrography, geochemistry and geothermal science, seismology. The choice of 3 optional subjects (in addition to the 2 electives) enables the composition of a personalized path according to three generically recommended orientations: geological-paleontological, geomorphological-applicative geological, volcanological-petrographic-geochemical-geophysical.

Professional opportunities

Profile:
Senior geologist
Functions:
Geologists can assist architects and engineers in the implementation of projects for the construction of public and private buildings, roads, bridges, tunnels etc. The geologist trained by this Degree Course is specifically addressed to the assessment of the geo-hydrological, seismic and volcanic risk and is an important figure for the collaboration with other technical planners (Architects and Engineers). Their functions are also used in the preparation of town planning regulations and in the design of new landfills and/or waste disposal plants.
Skills:
The required skills of graduates in the Geological Science and Technology class have changed hand in hand with the changed socio-economic structure both in Italy and in international contexts at large. The progressive transfer of interest from occupational activities and perspectives aimed at a total and sometimes indiscriminate use of the territory is known, in which the figure of the professional geologist acted as a support for example to that of the engineers, to activities aimed mainly at a more reasoned use of land resources. Activities were thus developed to find renewable energy resources (e.g. geothermal energy), enhancement of cultural and environmental heritage and above all the assessment of geological risks, in continental and marine environments.
Professional opportunities:
Geologists can work as freelance professionals, after passing the national professional qualification exam, also working in private engineering and geotechnical offices and laboratories. They may also find employment in public bodies with technical branches for the planning for the protection and safeguard of the landscape heritage as well as in bodies for the protection of Cultural Heritage. They can also find professional opportunities in public institutions for seismic, volcanic and hydrogeological surveillance. They may work as geologists at hydrocarbon research companies, as well as in companies for the extraction (quarries or mines) of material useful in civil engineering.
In addition, geologists may find employment in public and/or private companies dealing with landfill monitoring, as well as for the remediation of contaminated sites.

Final examination features

The final examination (27-33 credits) consists of the discussion of an original work (degree dissertation) of experimental or theoretical nature, prepared under the guidance of a supervisor and presented as a written dissertation. The dissertation topics should be related to issues related to class specific disciplines and their application. The final examination may include laboratory, field and/or internship activities. The board of the Degree Course specifies the criteria for the attribution of the final mark, which must take into account the consistency between expected educational objectives and outcomes, with reference also to the whole educational path.

Subjects 1 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
17201 - APPLIED GEOCHEMISTRY *Varrica(PA)*	6	1	V		GEO/08	B

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Subjects 1 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
18134 - TECHNICAL GEOLOGY AND GEOTECHNICS - INTEGRATED COURSE	9	1	V			
- ROCKS MECHANICS	*3*	*1*			*ICAR/07*	*C*
- TECHNICAL GEOLOGY *Cappadonia(PA)*	*6*	*1*			*GEO/05*	*B*
20691 - ENGLISH LANGUAGE SKILLS - EQUIVALENT TO LEVEL B2	6	1	G			F
03598 - APPLIED GEOPHYSICS *Martorana(PA)*	6	2	V		GEO/11	B
20605 - STRUCTURAL GEOLOGY WITH FIELD ACTIVITY	6	2	V		GEO/03	B
Optional subjects	6					B
Optional subjects II	6					B
Optional subjects III	6					B
Free subjects (suggested)	6					D
	57					

Subjects 2 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
13351 - ADVANCED SKILLS RELATED TO THE LABOUR MARKET	2	1	G			F
19807 - SEMINARS HELD BY THE REGIONAL BOARD OF GEOLOGISTS	1	1	G			F
05917 - FINAL EXAMINATION	27	2	G			E
18182 - INTERNSHIP AND PRACTICE	9	2	G			S
Optional subjects IV	18					C
Free subjects II	6					D
	63					

OPTIONAL SUBJECTS

Optional subjects	CFU	Sem.	Val.	Att.	SSD	TAF
19217 - CYCLOSTRATIGRAPHY AND STRATIGRAPHIC CORRELATIONS *Caruso(PO)*	6	2	V		GEO/01	B
19212 - MARINE GEOLOGY AND COASTAL RISK *Sulli(PO)*	6	2	V		GEO/02	B
Optional subjects II	**CFU**	**Sem.**	**Val.**	**Att.**	**SSD**	**TAF**
19213 - APPLIED GEOMORPHOLOGY AND GEO-HYDROLOGICAL RISK *Rotigliano(PO)*	6	1	V		GEO/04	B
09452 - MORPHOTECTONICS *Di Maggio(PA)*	6	1	V		GEO/04	B
Optional subjects III	**CFU**	**Sem.**	**Val.**	**Att.**	**SSD**	**TAF**
05671 - APPLIED PETROGRAPHY	6	2	V		GEO/09	B
10270 - VOLCANIC RISK *Aiuppa(PO)*	6	2	V		GEO/08	B
Optional subjects IV	**CFU**	**Sem.**	**Val.**	**Att.**	**SSD**	**TAF**
22463 - ADVANCED GIS APPLICATIONS - INTEGRATED COURSE	6	1	V			
- GEO-DATA ACCESS AND MANAGEMENT *Martinello(RD)*	3	1	V		GEO/04	C

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OPTIONAL SUBJECTS

Optional subjects IV	CFU	Sem.	Val.	Att.	SSD	TAF
- GIS ANALYSIS AND THEMATIC CARTOGRAPHY *Conoscenti(PO)*	3	1	V		GEO/04	C
24110 - ANALYSTICAL METHODS AND PETROLOGICAL MODELLING	6	1	V		GEO/07	C
22466 - BASIN ANALYSIS APPLIED TO NATURAL RESOURCE STUDIES *Pepe(PA)*	6	1	V		GEO/03	C
10702 - CARSOLOGY AND SPELEOLOGY *Madonia(PA)*	6	1	V		GEO/04	C
19804 - ENVIRONMENTAL GEOLOGY AND GIS ANALYSIS *Conoscenti(PO)*	6	2	V		GEO/04	C
22460 - GEOPHYSICS FOR NON-DESTRUCCTIVE TESTS	6	2	V		GEO/11	C
22464 - GEOTHERMAL ENERGY AND RENEWABLE ENERGIES *Parello(PO)*	6	1	V		GEO/08	C
19214 - HYDRAULIC RISK AND WATER BASIN MANAGEMENT *Ferro(PO)*	6	1	V		AGR/08	C
22461 - INLAND AND MARINE WATERS GEOCHEMISTRY *Calabrese(PA)*	6	2	V		GEO/08	C
22465 - INTRODUCTION TO GEMMOLOGY *Sciascia(PA)*	6	2	V		GEO/06	C
16881 - ISOTOPE GEOCHEMISTRY *Nogueira Lages(RD)*	6	2	V		GEO/08	C
05231 - MICROPALEONTOLOGY *Incarbona(PA)*	6	1	V		GEO/01	C
22459 - PLANETOLOGY AND PLANETARY VOLCANISM *Iaria(PA)*	6	2	V		FIS/05	C
05676 - SEDIMENTARY PETROGRAPHY *Scopelliti(PA)*	6	1	V		GEO/07	C
06384 - SEDIMENTOLOGY *Todaro(RD)*	6	1	V		GEO/02	C
22462 - SEISMIC RISK AND MICROZONATION	6	2	V		GEO/11	C
06441 - SEISMOLOGY *Palano(PA)*	6	2	V		GEO/10	C
19834 - VOLCANIC ACTIVITY SURVEILLANCE *Calabrese(PA)*	6	2	V		GEO/08	C
15310 - VOLCANIC PETROLOGY WITH FIELD ACTIVITIES *Rotolo(PO)*	6	1	V		GEO/07	C

Free subjects (suggested)	CFU	Sem.	Val.	Att.	SSD	TAF
12451 - GEOSCIENCES TEACHING METHODOLOGY *Madonia(PA)*	6	2	V		GEO/04	D

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