ANNEX 2.1

DEGREE PROGRAM DIDACTIC REGULATIONS

INGEGNERIA CIVILE (N38)

CLASS L-07

School: Politecnica e delle Scienze di Base

Department: Ingegneria Civile, Edile e Ambientale

Didactic Regulations in force since the academic year 2025-2026

Fill in for each course/integrated course included in the study plan

Course: Engineering Geology	**Teaching Language:** Italian
SSD (Subject Areas): GEOS -03 B (Ex GEO/05)	**CREDITS:** 6 CFU
Course year:	**Type of Educational Activity:**
Teaching Methods: In person	
Contents extracted from the SSD declaratory consistent with the training objectives of the course: Topic 1 (2 CFU) Geology and geomorphology: Structure of the Earth. Earthquakes. Volcanoes. Minerals, classification of rocks and their identification. Physico-chemical processes of landscape modeling (eg: rivers, glaciers, karst etc.). Fundamental principles of stratigraphy and tectonics (faults, thrusts etc.). Relative and absolute dating of the rocks. Topic 2 (3 CFU) Methods for studying the subsoil: a) indirect investigations (geo-electrical, geo-seismic etc.) and b) direct investigations through drilling with theoretical aspects, instrumentation, analysis of results and examples. Rocks as building materials. Study of groundwater (flow, springs, pumping tests, hydrogeological budget, chemistry and pollution of groundwater, mineral waters etc.). Landslides (classification, study and intervention criteria). Seismic and volcanic risk. Studies and geological problems relating to the artificial lakes, tunnels, railway and aqueduct infrastructures. Methods of use and restoration of quarries. Topic 3 (1 CFU) Elements of Geology of the Southern Apennines. The geological Maps	
Objectives: The course aims to transmit to the student the main knowledge of Earth Sciences to teach a correct protection of the natural environment and civil engineering works in accordance with the environment and natural resources. For this purpose, the student must know the main geological techniques and be able to apply them to environmental problems and to plan engineering	

"sustainable" interventions. Therefore, at the end of the course the student must: • have an adequate knowledge of the rocks constituting the earth's surface, of their use and of their interaction with engineering works; • have a knowledge of the endogenous and exogenous processes that shape the landscape and their effects; • have knowledge of direct and indirect subsoil investigation techniques; • be able to assess the natural resources, their use and protection; • understand the concepts of hazard and geological risk, especially with regard to landslides; • acquire notions of the interactions between the geological setting of the landscape and the engineering works (tunnels, dams, roads, railways and aqueduct infrastructures)

Propaedeuticities:

none

Is a propaedeuticity for:

Types of examinations and other tests:

Written with open answers and oral

WARNING: when compiling the Annex, it is essential to remember that it must be exactly the same as in the SUA (Annual single form of the Degree Program). If you wish to make any changes, you must consider that this action entails a change of Didactic Regulations or, if the field to be changed is RAD (University Didactic Regulations), of CdS detail sheet.