



GEOSCIENCES

Geology and Geochemistry

Principles of Geology. Genesis and classification of magmatic, sedimentary and metamorphic rocks. Geologic Time and Stratigraphic Scale for Portugal. Geology and Lithology of Portugal. Geological Cartography. Structure and tectonic. Porosity and permeability. Common solid phases in the weathering crust: silicates; oxides and hydroxides; carbonates; sulphates; chlorides. Weathering processes and secondary solid phases. Earth climatic regions and weathering processes.

Geomorphology

Relief genesis and evolution and its implications on landscape evolution and conservation. Geological Erosion: Fluvial erosion and surface runoff on landscape morphology. Slope dynamics – mass wasting and its geomorphic significance. Structural Relief. Peneplains and Pediplains genesis. Relief and water flow. Wind and sea erosion - geomorphic processes and geomorphology of coasts. Earth climatic regions and geomorphic processes. Applied Geomorphology: Morphogenetic and Pedogenetic systems; rate Morphogenesis/Pedogenesis and Landscape evolution and conservation - application to Landscape Management.