

Appendix 1

Earth and Atmospheric Sciences Sub-Disciplines

Earth sciences

- Geochemistry (the study of the distribution of chemical elements and natural compounds on the earth and in the atmosphere and the chemical processes that affect the earth),
- Geography
 - Cartography
Geologic maps (maps that show the distribution of geologic features, including different kinds of rocks and faults)
 - Physical Geography (the study of the natural features and phenomena of the earth's surface, as landforms, drainage features, climates, soils, and vegetation, etc)
 - Paleogeography (the study of the history of earth surface characteristics; geomorphology in the past)
- Geology
 - Geochronology (the study of the age of the earth by dating geological formations, rocks, and fossils.)
 - Geomorphology (the study of surface land features and the processes that create and change them)
 - Marine geology (the study of the composition, geologic history, and earth processes of the ocean floor and the continental margin),
 - Mineralogy (the study of naturally occurring inorganic elements or compounds)
 - Petrology (the study of soils)
 - Sedimentology (the study of the origin, composition, transport, and changes of materials deposited by water, wind, or ice)
 - Stratigraphy (the study of the formation, composition, ordering in time, and arrangement in space of stratified rocks)
 - Structural geology (the study of the distribution, position, shape, and internal structure of rocks)
 - Volcanology (the study of volcanism and the processes involved in magma flow and eruption through a vent in the earth's surface)
- Geophysics (the study of the physical characteristics and phenomena of the earth and its atmosphere)
- Glaciology (the study of the features, origins, processes, and properties of snow, ice, glaciers, and ice sheets)
- Hydrology (the study of water as it occurs in the atmosphere, on the surface of the ground, and underground)
- Limnology (the study of the physical and biological characteristics of inland bodies of water such as lakes and ponds)

- Oceanography (the study of the physical and biological characteristics of oceans)
- Paleontology (the study of life in past geologic time based on fossil plants and animals)
- Soil sciences (the study of the origin, classification, physical, chemical, and biological properties of soils)

Atmospheric sciences

- Meteorology (the study of the circulation of the atmosphere over short time spans)
- Climatology (the study of the effects of weather on life and examines the circulation of the atmosphere over longer time spans)

Source: U.S. Geological Survey (2011)