

DEPARTMENT OF GEOLOGY
GOVT. DEGREE COLLEGE RAMNAGAR

(NAAC Accredited)

PROGRAMME LEARNING OBJECTIVES IN BSC GEOLOGY

PO1: To understand the Earth's origin in the solar system, the evolution of hydrosphere and atmosphere as well as the earth's materials at the atomic level.

PO2: To understand the various geological processes that drive volcanoes and earthquakes, surface processes that shape landscapes and create the geological record.

PO3: To equip students with the fundamental knowledge of the diverse fields of Geology (encompassing Geomorphology and Surface Processes, Hydrology & Low-Temperature Geochemistry, Sedimentology and Paleocology, and Tectonics and Solid-Earth Processes). In addition, it is critical that students learn to think like a scientist and to apply the scientific method in their coursework and in their lives.

PO5: Demonstrate the ability to identify and differentiate rocks, minerals, fossils, other Earth materials and Earth structures in the field, as hand specimens and using laboratory techniques including microscopy and spectroscopic analysis.

PO6: Skill to observe and record original field and laboratory data and then apply these to evaluate and resolve geological and geotechnical problems.

PROGRAMME OBJECTIVES

- Provide training of the highest academic quality in Geosciences in a challenging and supportive learning environment.
- Expose the student to the vast scope of Geosciences as a theoretical and experimental science with applications in solving most of the geological problems in nature spanning from disaster management, watershed management, water pollution, oil exploration and mining, etc.
- Develop a systematic understanding of both core areas and advanced topics in the study of the Earth, its materials and structure, its history over 4600 million years, and the processes that have controlled its evolution as a planet by viewing Earth from new and challenging perspectives of time, space, process and pattern.
- Develop the ability to evaluate primary evidence critically; and the conceptual understanding to present arguments and solutions based on primary data and theory.
- Promote an appreciation of the limits to our present understanding of the Earth, its processes and the interactions between them.

- Stimulate students to see Geology as a vital component of our culture, where science develops as informed curiosity about the Earth and Society's environment, promoting human development and sustainability through the search for energy sources, raw materials, water supplies, sites for safe waste disposal, and the mitigation of natural hazards.
- Provide for student interaction with high-level scientific expertise and advanced equipment in an environment committed to scientific advance.
- Develop skills in gathering and interpreting the geological and geophysical data used to gain this understanding and thereby equip students with the foundations for their professional careers or additional study.
- Provide an excellent preparation for a career in professional practice in industrial or environmental Earth Sciences, research in Geosciences, and specialist areas of other physical and natural sciences.
- Geology as the most important discipline for sustaining the existing industries and establishing new ones to create job opportunities