

Shahid Matangini Hazra Govt. General Degree College for Women

Department of Geology

Programme outcome & Course Outcomes of Geology

Programme outcome (PO) in Geology (Honours)

Students will acquire a solid foundational knowledge of the entire science of geology regarding earth materials, earth history, petrology of the rocks, sedimentation and stratigraphy, deformation processes and structural features, and topographic processes and landforms. They will develop the skills to communicate complex geological concepts in clear, technically correct sentences. They will also develop the skills to verbally communicate complex geological concepts. They will also be able to use some software applications for research work such as CorelDraw, Matlab, Q-GIS, OpenRose, ImageJ etc. They will develop the skills and dispositions necessary to contribute to the democratization of society by obtaining and retaining employment as professional geologists.

PO	Description
PO1	Applying basic Geology Concepts
PO2	Developing fundamental understanding of the field
PO3	Ability of making use of Geological Problems
PO4	Developing skills in performing analysis and interpretation of data
PO5	Developing investigative Skills
PO6	Developing Technical and ICT skills
PO7	Developing skills in Mathematical modelling

Programme Specific Outcome (PSO):

PSO	Description
PSO1	Demonstrate a working knowledge of the terminology of geology with a comprehensive understanding of the earth's interior, surface, resources, climate, biosphere, and the different methods used to study them and as well as the optical and physical properties of minerals in hand specimens as well as under the microscope..
PSO2	Receive training in geochemistry of earth and geological field techniques such as mapping and surveying required for collection, interpretation and application of the geological data.
PSO3	Develop the knowledge regarding the basic concepts of Igneous and sedimentary petrology. Understand the formation and preservation of fossils, identifications of invertebrate and plant fossils.
PSO4	Develop the knowledge regarding the basic concepts of stratigraphy in order to understand the Precambrian and Phanerozoic stratigraphy of India, along with an Understanding of metamorphic petrology.
PSO5	Receive training in hydrogeology, economic geology and fuel geology. Understand various types of ore-forming processes and their relationship with tectonism.
PSO6	Recognize the importance of remote sensing and geographic information system in data acquisition and interpretation of satellite images and aerial photographs. Be professional geologist through exposure to theory and field exploration techniques in earth sciences.

Course outcome

On successful completion of the course, the student will be able to:

SEMESTER I

Course name	Course	Course outcome
MJ-1T: Earth System Science	CO1	CO1.1 Explain about Solid Earth, Hydrosphere, Atmosphere and Biosphere. CO1.2 Describe the Earth's internal structure. CO1.3 Examine plate tectonics, volcanism, isostasy, earthquake. CO1.4 Describe Oceanic current system and effect of Coriolis force. CO1.5 Discuss about Earth surface processes. CO1.6 Describe about importance of stratigraphy and geological time scale.
SEC 1: Field Geology I- Basic Field Training	CO2	CO2.1 Use of topographic sheets in the field. Marking location in topographic sheet using physical features and bearing. Use of GPS, clinometer etc.

SEMESTER II

Course name	Course	Course outcome
MJ-2: Mineral Science	CO3	CO3.1 Identify different types of crystals and their crystal system. CO3.2 Identify common rock-forming minerals in hand specimen and in thin section using diagnostic physical, optical, and chemical properties; Predict the formation environment of a silicate mineral; CO3.3 Describe the information that minerals can provide about Earth processes and Earth history; CO4.4 Apply the basic techniques of mineral characterization.
SEC 2: Field Work I- Geological Mapping and Structural Geology	CO4	CO4.1 Identification of lithological units and preparation of geological map of a small area