



**SHRI GOVINDRAOMUNGHATE COLLEGE ARTS AND SCIENCE COLLEGE
KURKHEDA**

Dist- Gadchiroli-441209

PROGRAMME: B. SC.

DEPARTMENT OF GEOLOGY

Programme Specific Outcome

- Students will acquire a of knowledge in geology as a complete as well as earth origin, earth history, minerology, petrology, historical geology, tectonical processes, deformational processes, structure and geomorphic processes.
- Students will develop proficiency in conveying complex geologic concepts in clear, theoretically correct writing.
- Students will develop skill in verbal communication of composite geologic thoughts.
- Students will grow the aptitudes necessary to help democratize society by procurement and preservingservice as a professional geologist.

SEMESTER – I

Paper Code: USGEOT01

Paper –IPHYSICAL GEOLOGY

- Students will know the earth as a member of solar system and compare with theother planets of the solar system.
- Students will understand formation on the earth and atmosphere, hydrosphere, lithosphere and biosphere.
- Students will understand the process of earthquakes and volcanoes.
- Students develop a cursory understanding of the soil origin and their types.
- Students understanda action and role of wind, rivers, ocean and glaciers.

SEMESTER – I

Paper Code: USGEOT02

Paper – II(Mineralogy and elementary mineral optics)

- Students develop the basic of mineral formation.
- Students understand physical properties of minerals and identification skill for minerals.

- Students develop light properties while studying optical properties of minerals.
- Students also get become operating knowledge of polarizing microscope and their applications.

SEMESTER – I Practical Paper Code: USGEOPO1

- Students understand physical properties of minerals and identification skill for minerals.

SEMESTER – II

Paper Code: USGEOT03

Paper –I (General Geology)

- Students understand the hypothesis of origin of the earth.
- Students study age of the earth
- Students can calculate age of earth by radiometric methods.
- Students learn Isostasy concept.
- Students understand and recognize the relationship between Diastrophic activity Geosyncline, Mountains formation and Sea-level changes,
- Students recognize the Continental drifting and Plate tectonics.

SEMESTER II–

Paper Code: USGEOT04

Paper-II: (Crystallography and Optical Mineralogy)

- Students know crystal structure and develop various concepts of crystals and can classify the mineral into several crystal systems.
- Students develop the skill to identify the minerals on the basis of crystal shape.

- Students understand the basic optical behaviour of minerals and develop a skill for their identification on the basis of optical properties.

SEMESTER – II Practical Paper Code: USGEOP02

- Students understand the basic optical behaviour of minerals and develop a skill for their identification on the basis of optical properties.

Semester-III

Paper code USGEOT05

Paper- I Igneous Petrology

- Students understand the concept of origin of rock and classify the rock types.
- Students understand the basics of igneous rocks, their origin, crystallization their classification, their occurrence, etc.
- Students develop the skill to identify the igneous rock.

BSc semester-III

Paper code USGEOT06

Paper- II Palaeontology

- Students will learn fundamental principles of paleoecology and better understand the science of evolutionary paleoecology.
- Students will understand methods of fossilizations.
- Students will understand issues related to the completeness of the fossil record.
- Students will understand how individuals grow and populations evolve through time and how to best describe populations of fossil organisms.
- Students will understand how to recognize and properly describe new fossil species.

- Students will understand the stratigraphic distribution of fossils, how to estimate true times of origination and extinction, and how to estimate rates of evolution and extinction using fossils.

SEMESTER – III Practical Paper Code: USGEOP03

- Students will understand how to identify igneous rock and fossils

Semester-IV

Paper code-USGEOT07

Paper I :Sedimentary Petrology and Metamorphic Petrology

- Students understand the origin of sedimentary & metamorphic rocks.
- Student develops the understanding of classification and occurrence of sedimentary & metamorphic rocks.
- Students develop the skill to identify the specific sedimentary & metamorphic rocks on megascopic and microscopic criteria.

Semester-IV

Paper Code USGEOT08

Paper- II Indian Stratigraphy

- Students will understand the chronological development of the rock formation.
- Students will understand the fundamental tools including subdivision of India
- Students will master information related to important rock succession in Peninsular, extra-peninsular India and Indo-Gangetic plane.
- Students will understand rock succession with economic importance and fossil record.
- Students understand the stratigraphic position and economic mineral deposit in Maharashtra.

SEMESTER – IV Practical Paper Code: USGEOP04

- Students will understand how to identify thin sections of igneous, sedimentary and metamorphic rocks
- Students will understand how to identify hand specimen of sedimentary and igneous rock

Semester-V

DISCIPLINE SPECIFIC ELECTIVE

Paper Code USGEOT09

Paper I: (Economic Geology)

- Student understand the scopes of economic geology
- Student will understand the variety of minerals deposits and their formations.
- Establish knowledge silicate and non-silicate variety of ore forming processes and identify common rock type minerals found in and around ore deposits.
- Demonstrate knowledge silicate and non-silicate variety of ore forming processes Identify common rock type minerals found in and around ore deposits.

Semester-V

DISCIPLINE SPECIFIC ELECTIVE

Paper Code: USGEOT10 DSE

Paper II: (Elements of Remote Sensing and Geomorphology)

- Students understand the basic concept of remote sensing and its application.
- Students develop the expertise to study and analyse the aerial photographs and satellite imageries.

- Students understand the basic concept of geomorphology and the processes responsible for its formation and development.
- Students develop the skill to identify the various geomorphology features and its relevance intra-disciplinary approach.

SEMESTER – V Practical Paper Code: USGEOP05

- Student understand to identify physical properties of ore and understand geomorphic features on the toposheet

SEMESTER – V

SKILL ENHANCMENT COURSE SEC

Paper Code:

Paper I: (Elements of Applied Geology)

- Students understand the basic engineering properties of rock and soil and their distribution in the India.
- Student enhance a skill of Elementary idea of mining and Environmental considerations for mining

SEMESTER – V SKILL ENHANCMENT COURSE SEC Practical Paper

Preparation of geological maps; Engineering properties and identification of building stones.

Semester-VI

Paper code- USGEOT13-

Paper I- Structural Geology

- Students understand the concept of geological structures and its process of formation.
- Students develop the ability to identify various structures like fold, fault, unconformity, joints etc in the field.

Semester-VI

Paper Code USGEOT14

Paper- II Elementary Hydrogeology and Environmental Geology

- Students will identify and be able to demonstrate understanding of the hydrologic cycle as it pertains to ground water systems.
 - Students establish understanding of surface water and ground water systems using the theories of hydraulically connected systems to predict the influence of pumping wells on availability of water in surface bodies.
 - Students will learn and be able to understanding of aquifers, aquitards, aquicludes, confined aquifers and unconfined aquifers.
 - Students will learn Indian groundwater provinces and watershed management.
- Environmental Geology
- Students will learn and be able to understand of hydrogeological properties,
 - Students will understand impacts of geologic hazards.
 - Students will understand impacts of water and air pollutions
 - Students will see the impacts of geologic processes on humans.
 - Students will investigate problems of water resource like large dams, reservoirs, and tunnels.

SEMESTER – VI

SKILL ENHANCMENT COURSE SEC

Paper Code:

Paper I: (Earth Resources)

- Students will learn the Mineral resources of the India.
- Students will learn the how to origin the energy and its various types.

SEMESTER – VI SKILL ENHANCMENT COURSE SEC Practical Paper USGEOP06

- Students learn to draw the various structural maps like contour and geological section maps.