

RAJEEV GANDHI GOVT. P.G. COLLEGE AMBIKAPUR

DEPARTMENT OF GEOLOGY

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Programme Outcomes :- After completion the degree, the student will be able to demonstrate:-

- PO 1 - A comprehensive knowledge of Geology and Earth System. Develop the conceptual and theoretical aspects of geology, student will also be able to demonstrate geomorphic process.
- PO 2 - Enhancing their knowledge in geological work as a professional field worker .
- PO 3 - They will able to demonstrate solar system and internal structure of earth, origin and age of the earth .
- PO 4 - Develop a thorough understanding of crystallography and mineralogy.
- PO 5 - Demonstrate the various kinds of silicate , composition, they will also be able to evaluate the laws of crystallography.
- PO 6 - student will also be able to describe physical properties and optical characteristics of various minerals .

DEPARTMENT OF GEOLOGY

B.Sc. Semester 1st

Paper – (DSC) Geodynamics & Geomorphology

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :-After successfully completing this course , the students will be able to -

- CO 1 - Understand basics of geology, solar system and internal structure of the earth, origin and age of the earth .
- CO 2 - understand the theories of continental drift and plate tectonics.
- CO 3 - understand causes and effects of earthquakes and explain weathering and its products.
- CO 4 - Describe concepts of geomorphology and landforms developed by various agencies.
- CO 5 - Explain about the physiographic and tectonic divisions of India

PO- CO Mapping

Paper – (Geodynamics and Geomorphology)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO					
PO-01	✓				
PO-02					✓
PO-03		✓			
PO-04					
PO-05				✓	

PO-06	✓				
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DEPARTMENT OF GEOLOGY

B.Sc. Semester 2nd

Paper – (DSC) Mineralogy & Crystallography

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :-After successfully completing this course , the students will be able to -

CO-1:- Explain about the basics of crystallography, various crystal forms, crystallographic axes and symmetry elements.

CO-2:- Describe various forms of normal classes of various crystal systems

CO-3:- Classify the minerals in various silicate group and explain their varieties

CO-4:- Describe the physical properties of various minerals.

CO-5:- Describe the optical characteristics of various minerals.

PO- CO Mapping

Paper – (Mineralogy and Crystallography)

PO \ CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓
PO-03					
PO-04		✓			

PO-05				✓	
PO-06	✓				

DEPARTMENT OF GEOLOGY (Semester 3rd)

Paper – (DSC) Petrology

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :- After successfully completing this course , the students will be able to -

- CO-1:- Explain about the basics of magma, various phase, I forms of magma .also able to demonstrate texture structure and classification of igneous rocks.
- CO-2:- Describe various kinds of sedimentary and metamorphic rocks.
- CO-3:- Demonstrate the projective analysis of A.C.F. & A.K.F. also able to describe metamorphic fancies and grads.
- CO-4:- Describe the rock associations in time & spaces , concept of rock kindred's.
- CO-5:- Evaluate the petro graphic provinces of India.

PO- CO Mapping Paper – (Petrology)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓
PO-03			✓		
PO-04					

PO-05		✓			
PO-06					✓

DEPARTMENT OF GEOLOGY (Semester 3rd)

Paper – Igneous Petrology (DSEC)

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :- After successfully completing this course , the students will be able to -

- CO-1:- Explain about the igneous petrology and various classification of igneous rocks.
- CO-2:- Describe various phases, diagrams and petrogenesis of magma. Also able to describe magmatism in different tectonic settings.
- CO-3:- Demonstrate the Felsic and Mafic igneous rocks.
- CO-4:- Describe the mode of occurrence of igneous rocks.
- CO-5:- Evaluate the important igneous rocks in hand specimens and thin sections.

PO- CO Mapping Paper – (Igneous Petrology)

PO \ CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓
PO-03			✓		
PO-04					

PO-05		✓			
PO-06				✓	

DEPARTMENT OF GEOLOGY (Semester 4Th)

Paper – (DSC) Structural Geology

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :- After successfully completing this course , the students will be able to -

CO-1:- Explain about the basics fundamental and scope of structural geology.

CO-2:- Describe the concept of morphology such as fold , fault , joint and unconformity morphology.

CO-3:- Demonstrate the concept & framework of tectonics with reference to India.

CO-4:- Describe various kinds of foliation and lineation.

CO-5:- Evaluate the effect of fold , faults morphology on outcrops .

PO- CO Mapping Paper – (Structural Geology)

PO \ CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓
PO-03		✓			
PO-04					

PO-05	✓				
PO-06				✓	

DEPARTMENT OF GEOLOGY (Semester 4th)

Paper – Sedimentary Petrology (DSEC)

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :- After successfully completing this course , the students will be able to-

- CO-1:- Explain about the origin of sediments, granulometry.
- CO-2:- Describe the sedimentary textures, structures and environment.
- CO-3:- Demonstrate the varieties of sedimentary rocks.
- CO-4:- Describe the concept and stages of diagenesis.
- CO-5:- Evaluate the Grain size scale and particle size of sedimentary rocks.

PO- CO Mapping

Paper – (SEDIMENTARY PETROLOGY)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO					
PO-01	✓				
PO-02					✓
PO-03		✓			
PO-04					

PO-05	✓				
PO-06				✓	

DEPARTMENT OF GEOLOGY (Semester 5Th)

Paper:- (DSC) Palaeontology and Stratigraphy

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :- After successfully completing this course , the students will

be able to -

- CO-1:- Explain about the concept of Palaeontology, Morphology and Stratigraphy.
- CO-2:- Describe various principles related to stratigraphy.
- CO-3:- Demonstrate the distribution, Stratigraphy & Economic importance of Bastar & Raohat group of rocks (Chhattisgarh), Distribution, stratigraphy & Economic importance of Vindhya & Chhattisgarh group of rocks etc.
- CO-4:- Describe the concept of fossilization, uses of fossils.
- CO-5:- Through understanding of physiographic and tectonic divisions of India.

PO- CO Mapping

Paper – (Palaeontology and Stratigraphy)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓

PO-03					
PO-04					
PO-05					
PO-06					

DEPARTMENT OF GEOLOGY (Semester 5Th)

Paper:- (DSE) ECONOMICS GEOLOGY

Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :-After successfully completing this course , the students will be able to-

- CO-1:- Explain about the concept of Ore and gangues.
- CO-2:- Describe various principles related to tenor, grade and lodes.
- CO-3:- Demonstrate the distribution, Metallic & Nonmetallic ore Economic importance of atomic minerals.
- CO-4:- Describe the concept of gemstones, uses of gemstones.
- CO-5:- Through understanding of Distribution of important ore minerals in India.

PO- CO Mapping Paper – (ECONOMICS GEOLOGY)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				

PO-02					✓
PO-03					
PO-04	✓				
PO-05				✓	
PO-06					

DEPARTMENT OF GEOLOGY (Semester 6Th)

Paper:- (DSC) Earth Resources & Applied Geology Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :-After successfully completing this course , the students will be able to -

- CO-1:- Explain about the Economic Geology & its perspectives: Global mineral deposit& resources. Also able to describe Distribution of mineral deposits in time & space.
- CO-2:- Describe geological, geographical distribution, mode of occurrence, mineralogy& economic importance of metallic and non-metallic deposits of India.
- CO-3:- Demonstrate the fundamental of coal petrography such as; Peat, Lignite, Bituminous & Anthracite coal deposits of Chhattisgarh.
- CO-4:- Describe the concept of Hydrologic cycle, mode of occurrence of ground water, quality of ground water, ground water provinces of India.
- CO-5:- Evaluate the environmental impacts of over exploitation of mineral resources.

PO- CO Mapping
Paper – (Earth Resources & Applied Geology)

PO \ CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO-01	✓				
PO-02					✓
PO-03		✓			
PO-04					
PO-05				✓	
PO-06					

DEPARTMENT OF GEOLOGY (Semester 6Th)

Paper:- (DSE) URBAN GEOLOGY Choice Based Credit System Under NEP 2020

Proposed Scheme Of Undergraduate Programme From 2022-23

Course Outcomes :-After successfully completing this course , the students will be able to -

- CO-1:- Explain about the Geology & Society.
- CO-2:- Describe geology and Urban Agriculture, soil studies.
- CO-3:- Demonstrate the Urban land uses and Urban water management.
- CO-4:- Describe the concept of Urban water Treatment.
- CO-5:- Evaluate the environmental impacts of over exploitation of Urban Geology.

PO- CO Mapping Paper – (URBAN GEOLOGY)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO					
PO-01	✓				
PO-02					✓

PO-03					
PO-04					
PO-05	✓				
PO-06				✓	

DEPARTMENT OF GEOLOGY
B.A. :- Semester 1st (GEC)
Paper:- Essentials Of Geology
Choice Based Credit System Under NEP 2020
Proposed Scheme Of Undergraduate Programme From
2022-23

Course Outcomes :- After successfully completing this course , the students will be able to-

- CO 1 – Understand basics of geology, solar system and internal structure of the earth, origin and age of the earth .
- CO 2 - understand the theories of continental drift and plate tectonics
- CO 3 - understand causes and effects of earthquakes and explain weathering and its products.
- CO 4 - Describe concepts of geomorphology and landforms developed by various agencies
- CO 5 - Explain about the physiographic and tectonic divisions of india .
- CO-6:- Develop awareness about the climate
- CO-7:- Develop understanding about oceans and mountains

PO- CO Mapping
Paper – (Essentials Of Geology)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO					
PO-01	✓				

PO-02					✓
PO-03					
PO-04					
PO-05					
PO-06					

DEPARTMENT OF GEOLOGY
B.A.:- 2nd Semester (GEC)
Paper:- Rocks & Minerals
Choice Based Credit System Under NEP 2020
Proposed Scheme Of Undergraduate Programme From
2022-23

Course Outcomes :- After successfully completing this course , the students will be able to –

- CO-1:- Explain the concept of igneous, sedimentary and metamorphic rocks
- CO-2:- Describe the mineralogy of the earth's , crust, mantle and core
- CO-3:- Classify the minerals in various silicate group and explain their varieties
- CO-4:- Describe the physical properties and classification of various minerals.
- CO-5:- Describe the optical characteristics of various minerals.

PO- CO Mapping
Paper – (Rocks and Minerals)

CO	CO-01	CO-02	Co-03	CO-04	CO-05
PO					

PO-01	✓			✓	
PO-02					✓
PO-03					
PO-04			✓		
PO-05					
PO-06		✓			