

**Dept. of Geography, Bankura Sammilani College**

**MODULE BREAKUP OF THE SYLLABUS**

**SESSION 2022-23**

**CLASS: Sem-I (Geography Honours)**

**Couse Code: SHGEO /101/C-1T**

**Geotectonic & Geomorphology**

Month	Topic
<b>July – August - September</b>	<p><b>Unit 1: Earth: Origin and Evolution</b></p> <ul style="list-style-type: none"><li>➤ Origin of Universe (Big Bang Model), Origin of Earth (Nebular Hypothesis of Laplace and Interstellar Dust Cloud Hypothesis of Schimdt)</li><li>➤ Geological Time Scale and Geological History of the Earth</li><li>➤ Isostasy: Origin of the concept, Theories of Airy and Pratt, Isostatic Adjustments, Gravity Anomalies</li><li>➤ Internal Structure of the Earth: Seismological Evidences, physical, chemical and seismic properties of Earth layers</li></ul> <p><b>Unit 2: Tectonic Theories and Processes</b></p> <ul style="list-style-type: none"><li>➤ Continental Drift Theory of Alfred Wegener</li><li>➤ Palaeo-Magnetism and Sea Floor Spreading</li><li>➤ Tectonic Processes in relation to Plate Tectonics; Orogenesis, Earthquake, Vulcanicity</li></ul>
<b>October – November -December</b>	<p><b>Unit 2: Tectonic Theories and Processes</b></p> <ul style="list-style-type: none"><li>➤ Plate Tectonic Theory; Plate Composition, Plate Movement, Plate Margins, Triple Junctions</li></ul> <p><b>Unit 3: Process Geomorphology</b></p> <ul style="list-style-type: none"><li>➤ Evolution of landforms on Uniclinal, Folded and Faulted Strata</li><li>➤ Landscape Evolution Models: Davis, Penck and Hack</li><li>➤ Climatic Geomorphology: Basic concepts, Morphoclimatic Zones of Peltier</li><li>➤ Hillslopes: Genesis and Morphology</li></ul>

**Dept. of Geography, Bankura Sammilani College**

**MODULE BREAKUP OF THE SYLLABUS**

**SESSION 2022-23**

**CLASS : Sem-I (Geography Honours)**

**Course Code: SHGEO /102/C-2P**

**Cartographic Techniques**

<b>Month</b>	<b>Topic</b>
<b>July – August September</b>	<b>Unit-1: Scale</b> <ul style="list-style-type: none"><li>➤ Scale: Definition and Types</li><li>➤ Construction of Linear, Comparative (Unit), Diagonal and Vernier scales.</li><li>➤ Scale Enlargement and Reduction (Computations)</li><li>➤ Calculation of area from maps (Graphical Methods)</li></ul>
<b>October – November - December</b>	<b>Unit-2: Map Projections</b> <ul style="list-style-type: none"><li>➤ Map Projections: Nature, Classification and Uses</li><li>➤ Basic Concepts: Parallels and Meridians, Datum, Geoid, Scale Factor, Deformation, Orthodrome and Loxodrome.</li><li>➤ Principles, Theories, Construction and Properties of select Map Projections: Conical Case- Simple Conical with one and two standard parallels, Polyconic and Sinusoidal; Cylindrical Case- Equal Area, Mercator Zenithal Case- Gnomonic, Stereographic</li><li>➤ UTM Grid System.</li></ul> <b>Unit-3: Surveying</b> <ul style="list-style-type: none"><li>➤ Concepts and Principles: Angles, Bearing and Azimuths, Traversing, Radiation, Intersection</li><li>➤ Prismatic Compass: Preparation of land use maps by open and closed traverse; computations of compass traverse- Included Angle, Area of traverse</li><li>➤ Levelling by Dumpy Level: Profile and Contouring</li><li>➤ Calculation of Height and Distance by Transit Theodolite (Base accessible and inaccessible)</li></ul>

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**SESSION 2022-23**  
**CLASS: Sem-III (Geography Honours)**  
**(Course Code: SHGEO /301/C-5T)**  
**Climatology**

Month	Topic
<b>July – August- September</b>	<p style="text-align: center;"><b>Unit-1: Structure and Composition of Atmosphere</b></p> <ul style="list-style-type: none"> <li>➤ Insolation: Factors and Distribution, Global Heat Budget</li> <li>➤ Inversion of Temperature: Processes and Impact on Surface Weather</li> <li>➤ Atmospheric Stability and Instability Forms and processes of Condensation; Mechanism of Precipitation: Ice Crystal and Collision-Coalescence Theory</li> </ul> <p style="text-align: center;"><b>Unit-2: Atmospheric Circulation</b></p> <ul style="list-style-type: none"> <li>➤ Factors controlling Air Motion and resulting Flow Patterns</li> <li>➤ Planetary Wind system with special reference to Tricellular Model; Walker Circulation and ENSO</li> <li>➤ Genesis of Monsoon with particular reference to South Asia</li> </ul>

<b>October – November - December</b>	<p style="text-align: center;"><b>Unit-2: Atmospheric Circulation</b></p> <ul style="list-style-type: none"> <li>➤ Jet Stream and Rossby Waves: Origin, Characteristics and Impact on Surface Weather</li> </ul> <p style="text-align: center;"><b>Unit-3: Extreme Events and Climatic Classification</b></p> <ul style="list-style-type: none"> <li>➤ Origin and Classification Airmass; Frontogenesis and Frontolysis</li> <li>➤ Origin and Characteristics of Tropical and Temperate Cyclones</li> <li>➤ Classification of World Climates: Schemes of Koppen and Thornthwaite</li> <li>➤ Climate Change: Causes and Evidences</li> </ul>
--	---

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**CLASS: Sem-III (Geography Honours)**  
**Course Code: SHGEO /302/C-6T**  
**Geography of India**

Month	Topic
July – August- September	<p style="text-align: center;"><b>Unit 1: Physical Setting</b></p> <ul style="list-style-type: none"> <li>➤ Tectonic and stratigraphic provinces, physiographic divisions</li> <li>➤ Climate, soil and vegetation: Characteristics and classification</li> <li>➤ Mineral and power resources distribution and utilisation of Iron ore, Coal, Petroleum, Gas</li> <li>➤ Regionalisation of India: Physiographic Division of India after R. L. Singh</li> </ul> <p style="text-align: center;"><b>Unit 2: Cultural and Economic setting</b></p> <ul style="list-style-type: none"> <li>➤ Population: Distribution, growth, structure and policy</li> <li>➤ Distribution of population by race, caste, religion, language, tribes and their correlates</li> <li>➤ Agricultural regions. Green Revolution and its consequences</li> <li>➤ Industrial development: Automobile and Information Technology</li> </ul>
	<p style="text-align: center;"><b>Unit 3: Geography of West Bengal</b></p> <ul style="list-style-type: none"> <li>➤ Physical perspectives: Physiographic divisions, forest and water resources</li> <li>➤ Population: Growth, distribution and human development</li> <li>➤ Resources: Mining, agriculture and industries</li> <li>➤ Regional Problem: Darjeeling Hills, Jangalmahal and Sundarban</li> </ul>
October – November - December	

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**CLASS: Sem-III (Geography Honours)**  
**Course Code: SHGEO /303/C-7P**  
**Statistical Methods in Geography**

Month	Topic
July – August- September	<p style="text-align: center;"><b>Unit-1: Data Collection and Representation</b></p> <ul style="list-style-type: none"> <li>➤ Geographical Data Management: Collection (Sampling Techniques- Significance and Types), Classification, Tabulation, Interpretation and Analysis of Geographical Data</li> <li>➤ Frequency Distribution: Attribute and Variable, Discrete and Continuous, Graphical Representation of Frequency Distribution (Histogram, Polygon, Curve and Ogives)</li> <li>➤ Measures of Central Tendency: Mean, Median and Mode; Skewness</li> <li>➤ Measures of Dispersion: Range, Quartile Deviation, Mean Deviation and Standard Deviation</li> </ul> <p style="text-align: center;"><b>Unit-3: Computer Application in Statistics</b></p> <ul style="list-style-type: none"> <li>➤ Data Entry: Arrangement into ascending and descending order</li> <li>➤ Representation of Frequency Distribution: Histogram, Frequency Polygon, Curve, Ogives,</li> <li>➤ Calculation of Mean, Median, Mode, Standard Deviation using formula</li> </ul>
October – November - December	<p style="text-align: center;"><b>Unit-2: Data Analysis and Interpretation</b></p> <ul style="list-style-type: none"> <li>➤ Scatter Diagram, Simple Correlation and Linear Regression</li> <li>➤ Time Series Analysis: Actual Trend, Semi Average, Moving Average,</li> <li>➤ Standard Error of Estimate and Standard Scores (Computations and Graphical Representation)</li> <li>➤ Absolute Residual Mapping</li> </ul> <p style="text-align: center;"><b>Unit-3: Computer Application in Statistics</b></p> <ul style="list-style-type: none"> <li>➤ Bivariate Techniques: Scatter Diagram and Fitting of Trend lines, Moving Average</li> </ul>

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**CLASS: Sem-III (Geography Honours)**  
**Course Code: SHGEO /305/SEC-1**  
**Computer Basics and Applications**

Month	Topic
<b>July – August- September</b>	<ul style="list-style-type: none"><li>➤ Computation, Storing and Formatting Spreadsheets: Computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Sample Variation; Derivation of Correlation, Covariance and regression; Selection of technique and interpretation.</li></ul>
<b>October – November - December</b>	<ul style="list-style-type: none"><li>➤ Preparation of Annotated Diagrams: Scatter diagram and Histogram; selection of technique and interpretation of diagrams</li><li>➤ Internet Surfing: generation and extraction of information. Cloud computing and drive sharing.</li></ul>

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**SESSION 2022-23**  
**CLASS: SEM V (Geography Honours)**  
**Course Code: SHGEO/501/C-11**  
**Evolution of Geographical Thought**

Month	Topic
<b>July – August - September</b>	<b>Unit-1: Development of Geography</b> <ul style="list-style-type: none"> <li>➤ Definition, Scope and Content of Geography</li> <li>➤ Development of Geography in the Ancient and Mediaeval Periods</li> <li>➤ Development of Modern Scientific Geography in the 19<sup>th</sup> Century with particular reference to the Contributions of Humboldt and Ritter</li> <li>➤ Development of Geography in the 20<sup>th</sup> Century: Quantitative Revolution and its impact</li> </ul>
	<b>Unit-3: Concepts and Trends in Geography</b> <ul style="list-style-type: none"> <li>➤ Concepts of Determinism, Possibilism and Neo-Determinism</li> <li>➤ Concepts of Empiricism and Positivism</li> <li>➤ Approaches to Geographic Studies: Systematic vs. Regional approach</li> <li>➤ Recent trend in Geography: Feminism, Post Modernism</li> </ul>

<b>October – November - December</b>	<b>Unit-2: Development of Schools of Thought in Modern Geography</b> <ul style="list-style-type: none"> <li>➤ German School</li> <li>➤ British School</li> <li>➤ American School</li> <li>➤ Indian School</li> </ul>
--	--

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**SESSION 2022-23 CLASS : Sem-V (Geography Honours)**  
**Course Title: SHGEO/502/C-12P**  
**Remote Sensing**

<b>Month</b>	<b>Topic</b>
<b>July – August- September</b>	<ul style="list-style-type: none"> <li>➤ Basic Concepts: Energy Sources, Interactions with Atmosphere, Sensing Systems, Resolutions: Spatial, Spectral, Radiometric and Temporal</li> <li>➤ Principles of preparing Standard False Colour Composites</li> </ul>
<b>October – November - December</b>	<ul style="list-style-type: none"> <li>➤ Principles of image interpretation and feature extraction. Preparation of inventories of land use land cover (LULC) features from satellite images.</li> <li>➤ Digital Image Processing: Subset Image, Spectral Signature,</li> <li>➤ Image Classification: Supervised and Unsupervised</li> </ul>



**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**SESSION 2022-23**  
**CLASS: SEM V (Geography Honours)**  
**Course Code: SHGEO/503/DSE-1**  
**Hydrology and Oceanography**

Month	Topic
<b>July – August - September</b>	<p style="text-align: center;"><b>Unit 2: Oceanography</b></p> <ul style="list-style-type: none"> <li>➤ Major relief features of the ocean floor: characteristics and origin according to plate tectonics.</li> <li>➤ Physical and chemical properties of ocean water</li> <li>➤ Water mass, T–S diagram</li> <li>➤ Ocean temperature and salinity: Distribution and determinants.</li> </ul> <p style="text-align: center;"><b>Unit 3: Ocean resources and sea level change</b></p> <ul style="list-style-type: none"> <li>➤ Coral reefs: Formation, classification and threats</li> <li>➤ Marine resources: Classification and sustainable utilization</li> </ul>
<b>October – November - December</b>	<p style="text-align: center;"><b>Unit 3: Ocean resources and sea level change</b></p> <ul style="list-style-type: none"> <li>➤ Concept of wave and tide</li> <li>➤ Sea level change: Types and causes</li> </ul> <p style="text-align: center;"><b>Unit 1: Hydrology</b></p> <ul style="list-style-type: none"> <li>➤ Systems Approach in hydrology. Global hydrological cycle: Its physical and biological role</li> <li>➤ Run off: controlling factors. Infiltration and evapotranspiration. Run off cycle</li> <li>➤ Drainage basin as a hydrological unit. Principles of water harvesting and watershed management</li> <li>➤ Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement.</li> </ul>

**Dept. of Geography, Bankura Sammilani College**  
**MODULE BREAKUP OF THE SYLLABUS**  
**SESSION 2022-23**  
**CLASS: SEM V (Geography Honours)**  
**Course Code: SHGEO/504/DSE-2**  
**Cultural and Settlement Geography**

Month	Topic
<b>July – August - September</b>	<p style="text-align: center;"><b>Unit 1: Cultural Geography</b></p> <ul style="list-style-type: none"> <li>➤ Definition, scope and content of Cultural Geography, development of cultural geography in relation to allied disciplines</li> <li>➤ Cultural Hearth and Realm; Cultural Diffusion, Cultural Segregation and Cultural Diversity, Diffusion of major world religions and languages</li> <li>➤ Culture, Technology and Development.</li> <li>➤ Races and racial groups of the world</li> </ul> <p><b>Unit 2: Rural Settlement</b></p> <ul style="list-style-type: none"> <li>➤ Rural Settlement: Definition, nature and characteristics of rural settlements</li> <li>➤ Morphology of rural settlements: site and situation, layout-internal and external</li> <li>➤ Rural house types with reference to India, Social segregation in rural areas;</li> <li>➤ Census categories of rural settlements.</li> </ul>
	<p style="text-align: center;"><b>Unit-3: Urban Settlement</b></p> <ul style="list-style-type: none"> <li>➤ Urban Settlements: Census definition (Temporal) and categories in India</li> <li>➤ Urban morphology: Classical models-Burgess, Homer Hoyt, Harris and Ullman Metropolitan concept.</li> <li>➤ City-region and Conurbation</li> <li>➤ Functional classification of cities: Harris, Nelson and Mackenzie</li> </ul>
<b>October – November - December</b>	