

## Silda Chandrasekhar College

### Teaching Plan(CCFUP) for the Academic Session 2023-24

Department: Geography

Name of the teacher: Sridam Kar

Stream: Science

Paper code: GEOHMJ101 Major: Theory & Practical

Teaching plan for 1 <sup>st</sup> semester students				
Syllabus allotted			Paper -	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Sep,23	20	01-T	20	Continental Drift. Plate Tectonics.
Oct,23	16	01-T	16	Plate Tectonics: Processes along different margins and resulting landforms.
Nov,23	15	01-T	15	Plate Tectonics: Processes along different margins and resulting landforms.
Dec,23	18	01-T	18	Sea floor spreading. Types of Fold and Fault.
Jan,24	20	01-P	20	Characteristics of Rocks and minerals and their identification.
Feb,24	04	01-P	04	Characteristics of Rocks and minerals and their identification.

Teaching plan for 3 <sup>rd</sup> semester students				
Syllabus allotted			Paper -	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Oct,23	03	C7T	03	Tectonic and stratigraphic provinces, physiographic divisions.
Nov,23	20	C7T	20	Climate, soil and vegetation: Characteristics and classification. Population: Distribution, growth, structure and policy. Distribution of population by race, caste, religion, language, tribes and their correlates.

Dec,23	18	C7T	18	Agricultural regions. Green revolution and its consequences. Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas; Industrial development: Automobile and information technology. Regionalisation of India: Physiographic (R. L. Singh), Socio-cultural (Sopher) and Economic (Sengupta).
Jan,24	20	C7T	20	Physical perspectives: Physiographic divisions, forest and water resources Population: Growth, distribution and human development Resources: Mining, agriculture and industries Regional Problem: Darjeeling Hills, Jangalmahal and Sundarban.

**Teaching plan for 5<sup>th</sup> semester students**

Syllabus allotted		Paper -		
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Sep,23	16	CC11T	16	Research in Geography: Meaning, types and significance Literature review and formulation of research design Defining research problem, objectives and hypothesis. Research materials and methods
Oct,23	15	CC11T	15	Techniques of writing scientific reports: Preparing notes, references, bibliography, abstract and keywords

Nov,23 & Dec,23	16	CC11T	16	<p>Fieldwork in Geographical studies – Role and significance. Selection of study area and objectives. Pre-field preparations. Ethics of fieldwork.</p> <p>Field techniques and tools: Observation (participant, non participant), questionnaires (open, closed, structured, non-structured). Interview with special reverence to focused group discussions.</p> <p>Field techniques and tools: Landscape survey using transects and quadrants, constructing a sketch, photo and video recording.</p> <p>Positioning and collection of samples. Preparation of inventory from field data. Post-field tasks.</p>
Dec,23 & Jan,24	25	CC11P	25	<p>Pactical Record</p> <ol style="list-style-type: none"> <li>i. Each student will prepare an individual report based on primary data collected form field survey and secondary data collected from different sources for either a rural area (<i>mouza</i>) or an urban area (municipal ward) based on cadastral or municipal maps to study specific problems.</li> <li>ii. The duration of the field work shall not exceed 10 days</li> <li>iii. The report should be hand written in English on A4 size paper in candidate's own words within 5,000 to 8,000 words excluding figures , tables , photographs , maps , references and appendices</li> <li>iv. A copy of the bound report, duly signed by the concerned teacher, should be submitted</li> </ol>
Sep,23	04	DSE2T: Resource Geograp hy	04	Natural Resources: Concept and classification.
Oct,23 & Nov,23	07	DSE2T: Resource Geograp hy	07	Problems of resource depletion—global scenario (forest, water, fossil fuels). Sustainable Resource Development.
Dec,23 & Jan,24	07	DSE2T: Resource Geograp hy	07	Contemporary Energy Crisis and Future Scenario. Politics of Power resources. Limits to Growth and Sustainable Use of Resources; Concept of Resource sharing.

<b>Teaching plan for 2<sup>nd</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper - GEOHMJ102 Major</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Mar,24	18	02-P	18	Maps: Classification and types. Components of a map.
Apr,24	18	02-P	18	Maps: Classification and types. Components of a map.
May,24	17	02-P	17	Concept and Construction of scales: Linear, comparative, diagonal and vernier.
June,24	18	02-P	18	Concept and Construction of scales: Linear, comparative, diagonal and vernier.
July,24	18	02-P	18	Concept and Construction of scales: Linear, comparative, diagonal and vernier.
Aug,24	16	02-P	16	Concept and Construction of scales: Linear, comparative, diagonal and vernier.

<b>Teaching plan for 4<sup>th</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper - CC10 Major</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Mar,24	20	C10T	20	Geographers' approach to environmental studies. Perception of environment in different stages of civilization. Concept of holistic environment and system approach.
Apr,24	20	C10T	20	Ecosystem: Concept, structure and functions.
May,24	18	C10T	18	Environmental pollution and degradation: Land, water and air.
June,24	18	C10T	18	Space–time hierarchy of environmental problems: Local, regional and global. Urban environmental issues with special reference to waste management. Environmental programmes and policies – Global, national and local levels.
July,24	20	C10P		Preparation of questionnaire for perception survey on environmental problems. Preparation of check-list for Environmental Impact Assessment of an urban / industrial project.

Aug,24	20	C10P	20	Quality assessment of soil using field kit: pH and NPK. Interpretation of air quality using CPCB / WBPCB data.
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<b>Teaching plan for 6<sup>th</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper - DSE-3 Major</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Feb,24	20	DSE-3T (Soil and Biogeography)	20	Factors of soil formation. Man as an active agent of soil transformation. Soil profile. Origin and profile characteristics of Lateritic, Podzol and Chernozem soils.
Mar,24	18	DSE-3T	18	Definition and significance of soil properties: Texture, structure and moisture, Definition and significance of soil properties: p <sup>H</sup> , organic matter and NPK
Apr,24	19	DSE-3T	19	Soil erosion and degradation: Factors, processes and mitigation measures Principles of soil classification: Genetic and USDA. Concept of land capability and its classification.
May,24	18	DSE-3T	18	Concepts of biosphere, ecosystem, biome, ecotone, community and ecology. Concepts of trophic structure, food chain and food web. Energy flow in ecosystems.
June,24	16	DSE-3T	16	Geographical extent and characteristic features of: Tropical rain forest, Taiga and Grassland biomes. Bio-geochemical cycles with special reference to carbon dioxide and nitrogen.
July,24	18	DSE-3T	18	Deforestation: Causes, consequences and management. Bio-diversity: Definition, types, threats and conservation measures.

Name of the teacher: Ranjit Shit

Paper code: GEOHMJ101 Major

Teaching plan for 1 <sup>st</sup> semester students				
Syllabus allotted			Paper –GeotectonicandGeomorphology(Theory)	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Sept' 23	14	Major 1	14	Modelsoflandscapeevolution:ViewsofDavis,Pe nck,CharacteristicsofRocksandminerals
Oct' 23	14	-Do-	14	Modelsoflandscapeevolution:ViewsofKingand Hack  Rocksandmineralsandtheiridentification:
Nov' 23	20	-Do-	20	GeologicalMaps:Understandingtopograph y,
Dec' 23	14	-Do-	14	GeologicalMaps:Structure,relationbetwee ntopographyandstructure,
Jan' 24	18	-Do-	18	GeologicalMaps:Geological succession and geological history through construction of geological section on Horizontal, Homoclinal, Folded and faulted Structure
Feb' 24	20	-Do-	20	GeologicalMaps:Geological succession and geological history through construction of geological section on Horizontal, Homoclinal, Folded and faulted Structure

**Teaching plan for 3<sup>rd</sup> semester students**

<b>Syllabus allotted</b>		<b>Paper –C6T, C6P, Statistical Methods in Geography</b>		
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Oct' 23	16	C6T	16	<p>Importance and significance of Statistics in Geography. Discrete and continuous data,</p> <p>Population and samples, scales of measurement(nominal, ordinal, interval and ratio), sources of data</p> <p>Components of a coastal zone. Coastal morphodynamic variables and their role in evolution of coastal forms.</p>
Nov' 23	22	Do	22	<p>Collection of data and formation of statistical tables</p> <p>Sampling: Need, types, and significance and methods of random sampling</p> <p>Environmental impacts and management of mining, oil exploration, salt manufacturing, land reclamation and tourism.</p>
Dec' 23	20	Do	20	<p>Theoretical distribution: frequency, cumulative frequency, normal and probability</p> <p>Coastal hazards and their management using structural and non-structural measures: Erosion, flood, sand encroachment, dune degeneration, estuarine sedimentation and pollution</p> <p>Measures of dispersion range, mean deviation, standard deviation, coefficient of</p>

				variation
Jan' 24	24	Do	24	<p>Association and correlation: Rank correlation, product moment correlation</p> <p>Regression (linear and non-linear) and time series analysis (moving average)</p> <p>Construction of data matrix with each row representing a geographical unit (districts/ blocks / mouzas/ towns) and corresponding columns of relevant attributes.</p> <p>Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted.</p> <p>Histograms and frequency curve would be prepared on the data set.</p> <p>From the data matrix a sample set (20%) would be drawn using, random, systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used.</p> <p>Based on of the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted and residual from regression would be mapped with a short interpretation.</p>

**Teaching plan for 5<sup>th</sup> semester students**

<b>Syllabus allotted</b>			<b>Paper – DSE-1, Hydrology and Oceanography</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>



Sept' 23	18	DSE-1	18	<p><b>Hydrology</b></p> <p>Systems approach in hydrology.</p>
Oct' 23	16	-Do-	16	<p>Runoff: controlling factors. Infiltration and evapotranspiration. Runoff cycle</p> <p>Drainage basin as a hydrological unit. Principles of water harvesting and watershed management</p>
Nov' 23	15	-Do-	15	<p>Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement.</p>
Dec' 23	14	-Do-	14	<p><b>Oceanography</b></p> <p>Major relief features of the ocean floor: characteristics and origin according to plate tectonics.</p> <p>Physical and chemical properties of ocean water</p> <p>Water mass, T-S diagram</p>
Jan' 24	18	-Do-	18	<p>Air-Sea interactions, ocean circulation, wave and tide.</p> <p>Ocean temperature and salinity: Distribution and determinants.</p> <p>Coral reefs: Formation, classification and threats.</p> <p>Marine resources: Classification and sustainable utilisation</p> <p>Sea level change: Types and causes</p>

**Paper code: GEOHMJ102**

**Major/Minor**

<b>Teaching plan for 2<sup>nd</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper –CartographicTechniques(Practical)</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Mar'24	17	HISPMJ-101, HISM-102/C2	17	Basicconceptsandprinciplesofsurveying.
Apr' 24	17	Do	17	Surveywithequipment:PrismaticCompass,
May' 24	15	Do	15	Dumpy level
June' 24	17	Do	17	Theodolite.
July' 24	19	Do	19	Abney level, Clinometer
Aug' 24	21	Do	21	Surveywithequipment:PrismaticCompass,Dumpy level
Sept' 24	21	Do	21	Theodolite, Abney level, Clinometer

<b>Teaching plan for 4<sup>th</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper –CC-9, SEC-2Economic Geography&amp; Research Methods</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Mar'24	18	CC-9, SEC-2	18	MeaningandapproachestoEconomicGeography,newEconomicGeography  Geographic Enquiry: Definition and Ethics; Literature Review; Framing Research Questions, Objectives and Hypothesis; Preparing Sample Questionnaires and inventories

Apr' 24	15	Do	15	<p>Concepts in Economic Geography: Goods and services, production, exchange and consumption</p> <p>Data Collection: Type and Sources of Data; Methods of data Collection; Data Input and Editing</p>
May' 24	22	Do	22	<p>Concept of economic man, theories of choices</p> <p>Economic distance and transport costs</p> <p>Concept and classification of economic activities</p> <p>Data Analysis: Qualitative and Quantitative Analysis; Techniques Data Representation</p>
June' 24	20	Do	20	<p>Factors affecting location of economic activity with special reference to agriculture (Von Thunen), and industry (Weber).</p> <p>Primary activities: Subsistence and commercial agriculture, forestry, fishing and mining</p>
July' 24	20	Do	20	<p>Secondary activities: Manufacturing (cotton textile, iron and steel), concept of manufacturing regions, special economic zones and technology parks</p> <p>Structure of a Research Report: Preliminaries; Text; Citation, Notes, References, Bibliography and Abstract and Key words.</p>
Aug' 24	25	Do	25	<p>Tertiary activities: transport, trade and services</p> <p>Agricultural systems: Case studies of tea plantation in India and mixed farming in</p>

				<p>Europe</p> <p>Transnational sea-routes, railways and highways with reference to India</p> <p>International agreements and trade blocs: GATT and OPEC</p>
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<b>Teaching plan for 6<sup>th</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper – C14T, C14P Disaster Management, DSE-4, Agriculture Geography</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Feb' 24	14	<b>C14T, C14P and DSE-4</b>	14	<p>Classification of hazards and disasters.</p> <p>Approaches to hazard study: Risk perception and vulnerability assessment.</p> <p>Hazard paradigms.</p>
Mar'24	22	<b>Do</b>	22	<p>Response to hazards: Preparedness, trauma and aftermath. Resilience and capacity building.</p> <p>Hazard mapping: Data and techniques. Progress of Agricultural Geography with reference to allied disciplines. Approaches to study of Agricultural Geography.</p>
Apr' 24	20	<b>Do</b>	20	<p>Earthquake: Factors, vulnerability, consequences and management</p> <p>Landslide: Factors, vulnerability, consequences and management. Origin and dispersal of agriculture; Role of agriculture on human society.</p>

May' 24	19	Do	19	<p><b>Project and Field work</b></p> <ol style="list-style-type: none"> <li>1. Thunderstorm</li> <li>2. Landslide</li> <li>3. Flood</li> <li>4. Coastal/riverbankerosion</li> <li>5. Fire</li> <li>6. Industrial accident</li> <li>7. Structuralcollapse</li> </ol> <p>Factorsaffectingagriculture.Classificationo fworldagricultural systems.</p>
June' 24	19	Do	19	<p>Cyclone:Factors,vulnerability,consequen cesandmanagementLocationandcharacte risticsofmajoragriculturaltypes:Intensive subsistence, extensive commercial and plantation agriculture.</p>
July' 24	26	Do	26	<p>Fire:Factors,vulnerability,consequencesa nd managementConcept of cropping pattern, crop combination, gross and net cropped area, croprotation.</p> <p>Acriticalreviewand contemporaryperspectiveofVonThunen' model</p> <p>Definitionandfactorsaffectingyield.Measur esofagriculturalproductivity</p> <p>RoleofirrigationinIndian agriculture</p> <p>Problemsofagriculturewithspecialreferenc etoSouthAsiancountries.</p> <p>Worldpatternsofagriculturalproductionan dfoodsecurity</p> <p>Landusesurveyandlandclassification(USDA )</p> <p>Globalizationandagriculturewithspecialref erenceto India</p>

Name of the teacher: Monika Dutta

Paper code: GEOHMJ101 Major

Teaching plan for 1 <sup>st</sup> semester students				
Syllabus allotted			Paper –GeotectonicsandGeomorphology(Theory)	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Sept' 23	14	Major 1		Geological time scale: Tectonic and biological history of Earth;
Oct' 23	13	-Do-	13	Dating of rocks: absolute and relativedating.Earth'sinteriorstructure:Seismo logicalevidence.
Nov' 23	18	-Do-	18	Isostasy:ModelsofAiryand Pratt.
Dec' 23	12	-Do-	12	Structuralimpactonlandforms:Drainagea ndlandformdevelopmentonHorizontal,
Jan' 24	16	-Do-	16	Homoclinal, Folded and Faulted structure
Feb' 24	17	-Do-	17	Isostasy:ModelsofAiry, absolute and relativedating.

Teaching plan for 3 <sup>rd</sup> semester students				
Syllabus allotted			Paper –CC-5, Climatology	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Oct' 23	14	DSC-1C SEC-1	14	Nature,compositionandlayeringofthe atmosphere,  Isolation:controllingfactors.Heatbudgetoft he atmosphere.
Nov' 23	20	Do	20	Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and

				consequences.Fronts:warmandcold;frontogenesisand frontolysis. Weather:stabilityandinstability;
Dec' 23	18	Do	18	Greenhouseeffectandimportanceofozon layer.Condensation:Processandforms.Mechanismofprecipitation:Bergeron-Findeisen theory, collision and coalescence. Forms of precipitation. Airmass:Typology,origin,characteristicsand modification. barotropicandbaroclinic conditions.
Jan' 24	22	Do	22	Circulationintheatmosphere:Planetarywinds,jetstream,indexcycle Tropicalandmid-latitude cyclones Monsooncirculationandmechanismwithreference toIndia ClimaticclassificationafterKöppen,Thornthwaiteand Oliver

<b>Teaching plan for 5<sup>th</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper – CC-12, Remote Sensing</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Sept' 23	16	CC-12	16	PrinciplesofRemoteSensing(RS):TypesofRS satellitesandsensors Sensorresolutionsandtheirapplicationswithreference toIRSandLandsat missions, image referencing schemes and data acquisition.

Oct' 23	15	-Do-	15	Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.  Principles of image interpretation.
Nov' 23	10	-Do-	10	Preparation of inventories of land use land cover (LULC) features from satellite images.
Dec' 23	12	-Do-	12	GIS data structures: types (spatial and non-spatial), raster and vector  Principles of preparing attribute tables, data manipulation and overlay analysis
Jan' 24	16	-Do-	16	Principles of GNSS positioning and waypoint collection  Transferring of waypoints to GIS. Area and length calculations from GNSS data.

**Paper code: GEOHMJ102** Major

<b>Teaching plan for 2<sup>nd</sup> semester students</b>				
<b>Syllabus allotted</b>			<b>Paper – Cartographic Techniques (Practical)</b>	
<b>Month</b>	<b>Expected number of classes</b>	<b>Paper</b>	<b>Number of Lectures</b>	<b>Topics to be covered</b>
Mar'24	16	HISPMJ-101, HISM-102/C2	16	Map projections: Classification of map projection
Apr' 24	18	Do	18	Construction, properties and uses of projections: Cylindrical Equal area
May' 24	14	Do	14	Polar Zenithal Stereographic, Simple conical with one standard parallel, Polyconic projection,
June' 24	15	Do	15	Bonne's, and Mercator's.
July' 24	17	Do	17	Concept and significance of UTM



				projection.
Aug' 24	19	Do	19	Map projections: Classification of map projection
Sept' 24	20	Do	20	Construction, properties and uses of projections: Cylindrical Equal area  Polar Zenithal Stereographic, Simple conical with one standard parallel, Polyconic projection,  Bonne's, and Mercator's.

### Teaching plan for 4<sup>th</sup> semester students

Syllabus allotted			Paper – CC-8 , Regional Planning and development	
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Mar'24	17	CC-8	17	Concept of regions: Types of regions and their delineation.  Types of planning,
Apr' 24	14	Do	14	principles and objectives of regional planning, multi-level planning in India  Tools and techniques of regional planning,
May' 24	21	Do	21	need for regional planning in India  Metropolitan concept: metropolitan areas, and urban agglomerations
June' 24	19	Do	19	Development: Meaning, growth versus development  Concept and strategies of regional development with reference to India

				Theories and models for regional development: Growth pole model of Perroux; growth centre model in Indian context
July' 24	18	Do	18	Theories and models for regional development: Cumulative causation (Myrdal) and core periphery (Hirschman, Rostov and Friedman)
Aug' 24	23	Do	23	Changing concept of development, concept of underdevelopment; efficiency-equity debate  Indicators of development: Economic, social and environmental. Human development.  Regional development in India, regional inequality, disparity and diversity  Need and measures for balanced development in India

**Teaching plan for 6<sup>th</sup> semester students**

Syllabus allotted		Paper –CC-13, Evolution of Geographical Thought,		
Month	Expected number of classes	Paper	Number of Lectures	Topics to be covered
Feb' 24	12	CC-13	12	Development of Geography and contributions of Greek, Chinese, and Indian geographers.  Impact of 'Dark Age'

Mar'24	<b>19</b>	<b>Do</b>	<b>19</b>	<p>Arab contributions Geography during the Age of 'Discovery' and 'Exploration' (Contributions of Portuguese Voyages, Columbus, Vasco da Gama, Magellan, Thomas Cook)</p> <p>Transition from Cosmography to Scientific Geography (Contributions of Bernard Varenus and Immanuel Kant);</p>
Apr' 24	<b>22</b>	<b>Do</b>	<b>22</b>	<p>Dualism and Dichotomies (General vs. Particular, Physical vs. Human, Regional vs. Systematic, Determinism vs. Possibilism, Ideographic vs. Nomeothetic)</p>
May' 24	<b>20</b>	<b>Do</b>	<b>20</b>	<p>Evolution of Geographical thoughts in Germany, France, Britain and United States of America.</p> <p>Contributions of Humboldt and Ritter</p> <p>Contributions of Richthofen, Hettner and Ratzel</p> <p>Schools of geographical thought: French,</p>
June' 24	<b>18</b>	<b>Do</b>	<b>18</b>	<p>British and American;</p> <p>Trends of Geography in the post World War-II period</p> <p>Evolution of Geography in India: formative periods, establishments and emerging trends</p> <p>Quantitative Revolution and its impact, behaviouralism,</p>
July' 24	<b>26</b>	<b>Do</b>	<b>26</b>	<p>systems approach, radicalism, feminism</p> <p>Towards Post Modernism: Changing concept of space in geography.</p> <p>Geography in the 21st Century</p>