

# Rishi Bankim Chandra Evening College

## Department of Geography

### Academic Calendar 2020-21 for B.Sc Course (Honours)

#### 1<sup>st</sup> Semester

Sem	Course code	Topic	Credit	Marks	Resource person
1	<b>GEOACOR01T</b>	<b>GEOACOR01T</b>	4	50	
	Unit I: Geotectonics	Earth's tectonic and structural evolution with reference to geological time scale			<b>RG</b>
		Earth's interior with special reference to seismology. Isostasy			<b>RG</b>
		Plate Tectonics as a unified theory of global tectonics: Processes and landforms			<b>MM</b>
		Folds and Faults—origin and types			<b>MM</b>
	Unit II: Geomorphology	Degradational processes: Weathering, mass wasting and resultant landforms			<b>SC</b>
		Development of river network and landforms on uniclinal and folded			<b>SC</b>
		Development of landforms on granites, basalts and limestones.			<b>MM</b>
		Glacial and glacio-fluvial processes and landforms			<b>MM</b>
		Aeolian and fluvio-aeolian processes and landforms			<b>MM</b>
		Models on landscape evolution:			<b>MM</b>
	<b>GEOACOR01P</b>	<b>Geotectonics and Geomorphology</b>	2	25	
		1. mineral sample 2. rock sample			<b>1. RG 2. MM</b>
		Interpretation of geological maps			<b>SC</b>

Sem	Course code	Topic	Credit	Marks	Resource person
1	<b>GEOACOR02T</b>	<b>Cartographic Technique</b>	4	50	
		Maps: Classification and type			MM
		Concept and application of scales			RG
		Survey of India topographical maps:			SC
		Concept of generating globe and UTM			MM
		Grids: angular and linear systems of			MM
		Map projections: Classification.			SC/MM
	<b>GEOACOR02P</b>	<b>Cartographic Techniques</b>	2	25	
		Graphical construction of scales			RG
		Construction of projections			MM
		Delineation of drainage basin from Survey of India topographical map. Construction and interpretation of relief profiles (superimposed, projected and			SC
		Correlation between physical and cultural features from Survey of India topographical maps using transect chart.			SC

# Rishi Bankim Chandra Evening College

## Department of Geography

### Academic Calendar 2020-21 for B. Sc. Course (General)

#### 1st Semester

Semester	Course code	Topic	Credit	Marks	Resource person
1	<b>GEOGCOR01T</b>	<b>Physical Geography</b>	6	75	
	<b>Unit I: Geotectonics and Geomorphology</b>				
		Physical Geography – Definition and Scope,			SC
		Internal Structure of Earth			SC
		Influence of rocks on topography:			MM
		Evolution of landforms under fluvial process, Normal Cycle of Erosion of Davis			MM
		Formation of erosional and depositional landforms by coastal and aeolian processes			MM
	<b>Unit II: Climatology and Oceanography</b>				MM
		Insolation and Heat Balance.			MM
		Horizontal and Vertical distribution of temperature and pressure			MM
		Planetary wind system, characteristics of Monsoon and Tropical Cyclone			MM
		Climatic Classification: Köppen			SC
		Hydrological Cycle, Ocean Bottom Relief Features, ocean currents.			SC

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### Academic Calendar 2020-21 for B. Sc. Course (Honours)

#### 3rd Semester

Semester	Course code	Topic	Credit	Marks	Resource person
III	<b>GEOACOR05T</b>	<b>Climatology</b>	4	50	
	<b>Unit I: Elements of the Atmosphere</b>	Nature, composition and layering of the atmosphere			RG
		Insolation			RG
		Temperature:			SC
		Greenhouse effect			SC
	<b>Unit II: Atmospheric Phenomena and Climatic</b>	Condensation:			RG
		Air mass:			RG
		Fronts:			MM
		Weather: stability and instability			MM
		Circulation in the atmosphere			MM
		Tropical and mid-latitude			MM
		Monsoon circulation			SC
	<b>GEOACOR05P</b>	<b>Climatology</b>	2	25	
		Interpretation of daily weather map of India (any two): Pre-			MM/RG
		Construction and interpretation of hythergraph and climograph (			SC
		Construction and interpretation of wind rose			MM

<b>Sem</b>	<b>Coursecode</b>	<b>Topic</b>	<b>Credit</b>	<b>Marks</b>	<b>Resource person</b>
<b>III</b>	<b>GEOACOR06T</b>	<b>Geography of India</b>	<b>6</b>	<b>75</b>	
		Tectonic and stratigraphic provinces, physiographic divisions			<b>MM</b>
		Climate, soil and vegetation			<b>MM</b>
		Population			<b>MM</b>
		Tribes of India			<b>MM</b>
		Agricultural regions			<b>MM</b>
		Mineral and power resources			<b>MM</b>
		Industrial development: Automobile and information technology			<b>RG</b>
		Regionalisation of India			<b>RG</b>
	<b>Unit II: Geography of West Bengal</b>	Physical perspectives			<b>SC</b>
		Resources: Agriculture, mining, and industry			<b>SC</b>
		Population: Growth, distribution and human development			<b>RG</b>
		Regional Issues: Darjeeling Hills and Sundarban			<b>RG</b>

Sem	Coursecode	Topic	Credit	Marks	No of lectures	Resource person
III	GEOACOR07T	<b>Statistical Methods in Geography</b>	4	50		
	<b>Unit I: Frequency Distribution and Sampling</b>	Importance and significance of statistics in Geography				MM
		Discrete and continuous data, population and samples, scales of				MM
		Sources of geographical data for statistical analysis				RG
		Collection of data and formation of statistical tables				RG
		Sampling: Need, types, and significance and methods of				SC
		Theoretical distribution: frequency, cumulative frequency,				SC
	<b>Unit II: Numerical Data Analysis</b>	Central tendency: Mean, median, mode, partition values				MM
		Measures of dispersion range: mean deviation, standard				MM
		Association and correlation: Rank correlation, product moment				SC
		Regression: Linear and non-linear				RG
		Time series analysis: Moving average				RG

Sem	Coursecode	Topic	Credit	Marks	No of lectures	Resource person
III	GEOACOR07P	<b>Statistical Methods in Geography</b>	2	25		
		<b>SL 1</b>				MM
		SL 2				MM
		SL 3				SC
		SL 4				RG

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## Department of Geography

### Academic Calendar 2020-21 for B. Sc. Course (General)

#### 3rd Semester

Semester	Course code	Topic	Credit	Marks	Resource person
3rd	<b>GEOGCOR03T</b>	<b>General Cartography</b>	4	50	
		Concept of map scale: Types and Application.			MM
		Map Projections: Criteria for choice of projections.			MM
		Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps.			SC
		Representation of Data – Symbols, Dots, Choropleth, Isopleth and Flow Diagrams, Interpretation of Thematic Maps.			SC
	<b>GEOGCOR03P</b>	<b>General Cartography</b>	2	25	
		Graphical construction of scales: Plain and comparative.			RG
		Construction of projections: Zenithal Gnomonic Polar Case, Zenithal Stereographic Polar Case, Cylindrical Equal Area, Mercator's Projection, Bonne's Projection			MM
		Construction and interpretation of relief profiles from Survey of India topographical map — superimposed, projected and composite, relative relief map, slope map (Wentworth), and Correlation between physical and cultural features from Survey of India topographical maps using transect chart.			SC

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### Academic Calendar 2020-21 for B. Sc. Course (Honours)

#### 5th Semester

Sem	Course code	Topic	Credit	Marks	Resource person
5	<b>GEOACOR11T</b>	<b>Fieldwork and Research Methodology</b>	4	50	
	<b>Unit 1: Research Methodology</b>	Research in Geography:			MM
		Literature review and formulation of research design			RG
		Defining research problem, objectives and hypothesis.			SC
		Research materials and methods			SC
		Techniques of writing scientific reports			MM
	<b>Unit II: Fieldwork</b>	Fieldwork in Geographical studies:			RG
		Field techniques and tools:			RG
		Field techniques and tools:			MM
		Positioning and collection of samples. Preparation of inventory from field data.			MM
		Post-field tabulation, processing and analysis of quantitative and qualitative data			SC
	<b>GEOACOR11P –</b>	<b>Fieldwork and Research Methodology (Lab)</b>	2	25	MM/SC



<b>Sem</b>	<b>Course code</b>	<b>Topic</b>	<b>Credit</b>	<b>Marks</b>	<b>Resource person</b>
5	<b>GEOACOR12T</b>	<b>Remote Sensing and GIS</b>	5	50	
	<b>Unit 1: Remote Sensing</b>	Principles of Remote Sensing (RS)			MM
		Sensor resolutions and their applications with reference to IRS and Landsat missions			MM
		Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data			RG
		Principles of image correction and interpretation. Preparation of inventories of landuse land cover (LULC) features from satellite images.			RG
	<b>Unit II: GIS and Global Navigation Satellite System</b>	Concept of GIS and its applicability ; GIS data structures			MM
		Principles of preparing attribute tables and data manipulation and overlay analysis			MM
		Transferring waypoints to GIS. Area and length calculations from GNSS data			RG
		Transferring waypoints to GIS			RG
	<b>GEOACOR12P</b>	<b>Remote Sensing and GIS</b>	2	25	
		Georeferencing of maps and images using Open Source software			SC
		Preparation of FCC and identification of features using standard FCC and other band combinations			SC
		Digitisation of features. Data attachment, overlay and preparation of annotated thematic maps			SC

Sem	Course code	Topic	Credit	Marks	Resource person
5	<b>GEOADSE01T</b>	<b>Soil and Biogeography</b>	6	75	
	<b>Unit 1: Soil</b>	Factor of soil formation			SC
		Soil Profile			SC
		Texture structure moisture			SC
		pH, organic matter, and NPK			SC
		Soil erosion and degradation			RG
		Principles of soil classification			RG
	<b>Unit II: Biogeography</b>				
		Concept of Biosphere etc....			RG
		Concept of trophic structure etc...			RG
		Tropical, taiga, grassland biome			MM
		Bio-geochemical cycles			MM
		Spatial distribution of world fauna			MM
		Measures of conservation of biodiversity			MM
Sem	Course code	Topic	Credit	Marks	
5	<b>GEOADSE03T</b>	<b>Population Geography</b>	6	75	
	<b>Unit 1:</b>	Development of Population Geography as a field of specialization.			RG
		Population distribution:			RG
		World patterns determinants of population distribution and growth			MM
		Population distribution, density and growth profile in India			MM
	<b>Unit II: Population &amp; Development</b>	Concepts of Age-Sex Composition			MM
		Measurements of fertility and mortality			MM
		Population composition of India			MM
		Migration			RG
		National and international patterns of migration			RG
		Population and development			MM
		Population policies in developed and less developed countries			MM
		Contemporary Issues			MM

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#### 5<sup>th</sup> Semester

Semester	Course code	Topic	Credit	Marks	Resource person
5th	GEOGDSE01T	Soil and Biogeography	6	75	
	<b>UNIT 1: Soil</b>				RG
		Factors of soil formation			RG
		Soil profile. Origin and profile characteristics of Lateritic and Chernozem soils			RG
		Soil profile. Origin and profile characteristics of Lateritic and Chernozem soils			RG
		Principles of soil classification: Genetic and USDA. Concept of land capability and its classification			RG
	<b>Unit II: Biogeography</b>				
		Concepts of biosphere, ecosystem, biome, ecotone, community, niche and succession.			MM
		Concepts of food chain and food web. Energy flow in ecosystems			MM
		Geographical extent and characteristic features of: Tropical rain forest and Grassland biomes			MM
		Bio-geochemical cycles with special reference to carbon dioxide and nitrogen.			MM