Domkal Girls' College
Domkal,
Murshidabad

Department: Geography
Curriculum Distribution
Academic Session: 2024-2025
Semester: 1

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1)	UNIT I: GEOTECTONICS	1. Earth's tectonic and structural evolution with reference to geological time scale	Daisy Nargis	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1)	UNIT I: GEOTECTONICS	2. Earth's crust and interior: Internal structure with reference to seismological evidences	Nabin Mandal	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT I: GEOTECTONICS	3. Theories of Isostasy: Airy and Pratt	Daisy Nargis	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT I: GEOTECTONICS	4. Continental drift theory: Evidences and criticism; Concept of Sea Floor Spreading and Palaeomagnetism	Daisy Nargis	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT I: GEOTECTONICS	5. Plate Tectonics: Mechanism and resultant landforms; Earthquakes and Vulcanicity	Nabin Mandal	8
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT I: GEOTECTONICS	6. Folds and Faults: Origin and classification	Nabin Mandal	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	1. Fundamental principles of Geomorphology	Daisy Nargis	5

GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	2. Degradation processes: Weathering, Mass wasting and resultant landforms	Daisy Nargis	6
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	3. Theories of landscape evolution: Davis, Penck and Hack	Nabin Mandal	6
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	4. Slope development: Theories of King and Wood	Daisy Nargis	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	5. Development of river network and landforms on uniclinal and folded structures	Nabin Mandal	5
GEOTECTONICS AND GEOMORPHOLOGY	Major (GEOG-M-T-1	UNIT II: GEOMORPHOLOGY	6. Processes and landforms: Fluvial, Glacial, Aeolian and Coastal	Daisy Nargis & Nabin Mandal	12

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 1st

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
Basics of Computer and Computer Applications	SEC (GEOG-SEC-P-1)	I	1. Basics of computer and its operation 2. Numbering Systems - Binary Arithmetic 3. Preparation of Annotated diagrams and its interpretation: Line graph, Bar and Pie diagrams, Histogram and Scatter diagrams 4. Data Computation, Storing and Formatting in Spreadsheets: Computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Derivation of Correlation, Coefficient of Variation, Regression 5. Internet Surfing: Generation and Extraction of Information	Nabin Mandal	36

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 1st

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	1. Internal structure of the earth 2. Continental drift theory: Mechanism, evidences and criticisms	Daisy Nargis	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	3. Plate tectonics: Mechanism and resultant landforms 4. Geomorphic process: Weathering	Nabin Mandal	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	5. Processes and landforms: Fluvial, Glacial, Aeolian and Coastal	Daisy Nargis & Nabin Mandal	12
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	6. Composition and structure of the atmosphere 7. Insolation, Heat budget, Horizontal and vertical distribution of temperature	Daisy Nargis	10
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	8. Hydrological cycle 9. Definition of soil, concept of soil profile and soil forming factors;	Daisy Nargis	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	10. Types of soil: Zonal,Azonal and Intrazonal 11. Concept of ecology and ecosystem; Biome: Tropical rain forest and Taiga	Nabin Mandal	8

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 2nd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT I: POPULATION GEOGRAPHY	1. Development of Population Geography; Relation between Population Geography and Demography 2. Determinants of Population Dynamics: Fertility, Mortality and Migration 3. Population Composition (Age-Sex and Occupational Structure)	Daisy Nargis	20
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT I: POPULATION GEOGRAPHY	4. Theories of population growth: Malthus and Marx;	Daisy Nargis	5
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT I: POPULATION GEOGRAPHY	5. Demographic Transition Theory(Thompson and Notestein)	Daisy Nargis	5
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT I: POPULATION GEOGRAPHY	6. Migration: types, causes and theories	Daisy Nargis	7
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT I: POPULATION GEOGRAPHY	7. Population Policies (India and Sweden)	Daisy Nargis	3

POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT II: SETTLEMENT GEOGRAPHY	1. Development of Settlement Geography 2. Rural settlement: Site, situation, types and pattern 3. Morphology of rural settlements: layout-internal and external Theory and hierarchy of settlements	Nabin Mandal	15
POPULATION AND SETTLEMENT GEOGRAPHY	Major (GEOG-M-T-2)	UNIT II: SETTLEMENT GEOGRAPHY	4. Urban settlements: Census definition, Urban agglomeration; Urban sprawl, Rural-urbancontinuum, Rurban and Periurban 5. Urban morphology: Classical Models of Burgess, Hoyt, Harris and Ullman 6. Central Place	Nabin Mandal	17

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 2nd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
FIELD WORK	SEC (GEOG-SEC-P-2)	I	Students are required to carry out a comprehensive field work in a village/mouza/town/C.D. Block/ drainage basin selecting a particular research problem. There should be a clear-cut title, problem statement, objectives, methodology and major findings. The text of the report shouldnot exceed 5000 words and 15-20 pages of illustrations (A4 Pages). The diagrams and illustrations should be prepared in computer using the standard format	Nabin Mandal	36

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 2nd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	12. Internal structure of the earth 13. Continental drift theory: Mechanism, evidences and criticisms	Daisy Nargis	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	14. Plate tectonics: Mechanism and resultant landforms 15. Geomorphic process: Weathering	Nabin Mandal	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	16. Processes and landforms: Fluvial, Glacial, Aeolian and Coastal	Daisy Nargis & Nabin Mandal	12
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	17. Composition and structure of the atmosphere 18. Insolation, Heat budget, Horizontal and vertical distribution of temperature	Daisy Nargis	10
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	19. Hydrological cycle 20. Definition of soil, concept of soil profile and soil forming factors;	Daisy Nargis	6
PHYSICAL GEOGRAPHY	Minor (GEOG-MI-T-1)	I	21. Types of soil: Zonal,Azonal and Intrazonal 22. Concept of ecology and ecosystem; Biome: Tropical rain forest and Taiga	Nabin Mandal	8

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 2nd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
DISASTER MANAGEMENT	Multidisciplinary Course (GEOG-MU-T-1)	I	1. Definition and Concepts: Hazards, Disasters; Risk and Vulnerability; Classification ofhazards 2. Flood, drought, landslide: causes, impact and distribution in India 3. Earthquake: causes, effects and seismic zones of India; Tsunami: causes and effects 4. Tropical Cyclone: structure, formation and impact with reference to India	Nabin Mandal	24
DISASTER MANAGEMENT	Multidisciplinary Course (GEOG-MU-T-1)	I	5. Manmade disasters in India: soil erosion and accidental release of toxic chemicals – causesand impact 6. Disasters - response and mitigation measures: Institutional set up - NDMA and NIDM; Indigenous knowledge and community-based Disaster Management; Do's and Don'ts duringand post disasters	Daisy Nargis	12

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 3rd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
FUNDAMENTALS OF REMOTE SENSING, GIS AND GNSS	Major Course (GEOG-M-T-3)	UNIT I: FUNDAMENTALS OF REMOTE SENSING	1. Definition and stages of remote sensing; EMR and its spectral ranges 2. Remote sensing platforms, satellites and sensors 3. Sensor resolutions and their applications with reference to IRS and LANDSAT missions 4. Concept of FCC; Principles of image interpretation (visual and digital) 5. Aerial Photographs: types, geometry and photo interpretation keys 6. Applications of remote sensing in managing agriculture, water and forest resources; Monitoring urban growth and environmental degradation	Daisy Nargis	36
FUNDAMENTALS OF REMOTE SENSING, GIS AND GNSS	Major Course (GEOG-M-T-3)	UNIT II: FUNDAMENTALS OF GIS AND GNSS	1. Definition, components and applications of GIS 2. GIS data structures types: spatial and non-spatial, raster and vector 3. Principles of preparing attribute tables, data manipulation and overlay analysis 4. Principles and significance of buffer preparation 5. Basic concept of GPS 6. Principles of GNSS positioning and waypoint collection; GIS- GNSS integration	Nabin Mandal	36

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 3rd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
APPLICATIONS OF REMOTE SENSING AND GIS	SEC (GEOG-SEC-P-3)	I	1. Acquisition procedure of free geospatial data from NRSC /Bhoonidhi and USGS 2. Georeferencing of maps and images; Digitisation of features: Point, Line and Polygon 3. Data attachment and preparation of thematic map (bargraph, pie-chart and choropleth); Overlay analysis 4. Preparation of FCC using IRS LISS-III/IV and/or LANDSAT (ETM+) data; Image enhancement 5. Preparation of LULC map by Supervised Image Classification (Maximum Likelihood) using IRS LISS-III/IV or LANDSAT (ETM+) data [Note: Using Q-GIS (open access) software] *A Project File of exercises consisting of each theme is to be submitted	Nabin Mandal	36

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 3rd

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
HUMAN GEOGRAPHY	Minor (GEOG-MI-T-2)	I	1. Distribution and growth of population in India 2. Demographic Transition Theory 3. Migration: Concept, types and causes 4. Economic activities: Primary, Secondary and Tertiary 5. Types and patterns of rural settlements	Daisy Nargis	24
HUMAN GEOGRAPHY	Minor (GEOG-MI-T-2)	I	6. Urban settlement: Census definition and characteristics 7. Functional classification of towns 8. Major ethnic groups in India: Santhal, Gond, Toda and Khasi 9. Concept of culture, Cultural hearths and Cultural diffusion Human Development Index	Nabin Mandal	24

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 4th

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
CLIMATOLOGY, SOIL AND BIOGEOGRAPHY	Major (GEOG-M-T-4)	UNIT I: CLIMATOLOGY	1. Temperature: Horizontal and vertical distribution; Heat budget of the atmosphere; Inversion of temperature: types and causes 2. Circulation in the Atmosphere: Planetary winds; Jet stream 3. Air mass and front: Origin, characteristics and types 4. Monsoon Circulation and Mechanism with reference to India 5. Condensation: Processes and forms; Mechanism of precipitation: Bergeron-Findeisen Theory, Collision and coalescence; Forms of precipitation 6. Concept of climate change; Climatic Classification after Köppen and Thornthwaite (1931 and 1948)	Daisy Nargis	36
CLIMATOLOGY, SOIL AND BIOGEOGRAPHY	Major (GEOG-M-T-4)	UNIT II: SOIL AND BIOGEOGRAPHY	1. Factors of soil formation; Concept of soil profile; origin and profile characteristics of Laterite, Podzol and Chernozem soils 2. Physical and chemical properties of soil: Texture, structure and moisture, pH, organic matter and NPK 3. Principles of soil classification: Genetic and USDA. Concept of land capability and its classification	Nabin Mandal	36

			4. Concepts of ecology, biosphere, ecosystem, biome, ecotone, community; Energy flow in ecosystems 5. Geographical extent and characteristic features of Tropical rain forest, Taiga and Grassland biomes 6. Bio-geochemical cycles with special reference to carbon dioxide and nitrogen; Bio-diversity: Definition, types, threats and conservation measures		

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 4th

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
CARTOGRAPHIC TECHNIQUES AND SURVEYING	MAJOR GEOG-M-P-5)	I	1. Construction of Scales: Linear, Comparative, Diagonal and Vernier 2. Representation of Data on Map by Proportional Circles, Dots and Spheres, Isolpleth and Choropleth methods 3. Diagrammatic Representation of Data: Bar and Age-sex Pyramid Diagram, Pie Diagram 4. Preparation and Interpretation of Climograph, Taylor Hythergraph and Ergograph	Daisy Nargis	36
			5. Measures of Concentration: Location Quotient 6. Proximity Analysis: Nearest Neighbour Analysis 7. Traversing by Prismatic Compass and Dumpy Level Surveying with One Change Point (profile drawing and contouring) 8. Determination of height of objects by Transit Theodolite (level ground base accessible case)	Nabin Mandal	36

Department: Geography
Curriculum distribution
Academic session: 2024-2025
Semester: 4th

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
HUMAN GEOGRAPHY	Minor (GEOG-MI-T-2)	I	1. Distribution and growth of population in India 2. Demographic Transition Theory 3. Migration: Concept, types and causes 4. Economic activities: Primary, Secondary and Tertiary 5. Types and patterns of rural settlements	Daisy Nargis	24
HUMAN GEOGRAPHY	Minor (GEOG-MI-T-2)	I	6. Urban settlement: Census definition and characteristics 7. Functional classification of towns 8. Major ethnic groups in India: Santhal, Gond, Toda and Khasi 9. Concept of culture, Cultural hearths and Cultural diffusion Human Development Index	Nabin Mandal	24

Department: Geography
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Academic session: 2024-2025
Semester: 4th

Title of the Paper	Courses	Unit	Contents	Name of Faculty Members	Number of Lecture
DISASTER MANAGEMENT	Multidisciplinary Course (GEOG-MU-T-1)	I	1. Definition and Concepts: Hazards, Disasters; Risk and Vulnerability; Classification ofhazards 2. Flood, drought, landslide: causes, impact and distribution in India 3. 3. Earthquake: causes, effects and seismic zones of India; Tsunami: causes and effects 4. Tropical Cyclone: structure, formation and impact with reference to India	Nabin Mandal	24
DISASTER MANAGEMENT	Multidisciplinary Course (GEOG-MU-T-1)	I	5. Manmade disasters in India: soil erosion and accidental release of toxic chemicals – causesand impact 6. Disasters - response and mitigation measures: Institutional set up - NDMA and NIDM; Indigenous knowledge and community-based Disaster Management; Do's and Don'ts during and post disasters	Daisy Nargis	12

Nabin Mandal 10/12/2024
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