SIDDHINATH MAHAVIDYALAYA
DEPARTMENT OF GEOGRAPHY
TEACHING PLAN FOR ODD SEM 2024

SEM	PAPER	UNIT	TOPIC	TEACHER	NO OF LECTURE	TO BE COMPLETED BY
1st SEMESTER	Major-1 (GEOHMJ101)	MJ-1T: Geotectonics and Geomorphology (Theory) Credits 3	Course contents 1. Geological time scale: Tectonic and biological history of Earth; Dating of rocks: absolute and relative dating. Earth's interior structure: Seismological evidence. Isostasy: Models of Airy and Pratt. 2. Continental Drift; Plate Tectonics: Processes along different margins and resulting landforms. Types of Fold and Fault; Sea floor spreading 3. Geomorphic processes and resultant forms: Weathering, Mass wasting, River, Glacier and Wind 4. Structural impact on landforms: Drainage and landform development on Horizontal, Homoclinal, Folded and Faulted structure 5. Models of landscape evolution: Views of Davis, Penck, King and Hack	TS+SP	24+12	February
		MJ-1P: Geotectonics and Geomorphology (Practical) Credits 01	1. Characteristics of Rocks and minerals and their identification: 2. Geological Maps: Understanding topography, structure, relation between topography and structure, geological succession and geological history through construction of geological section on Horizontal, Homoclinal, Folded and faulted Structure	AKA	12	February
	SEC (GEOSEC01)	SEC 1: Computer Basics and Applications (Practical) Credits 03	Course Outline: 1. Knowing computer: what is computer, basic application of computer, computer memory, concepts of hardware and software; operating system; running an application, viewing of file, folders and directories, creating and renaming of files and folders. 2. Understanding word processing. 3. Using spreadsheet: basics of spreadsheet; manipulation of cells; formulas and functions, editing of spreadsheet, printing of spreadsheet. 4. Concept of internet; application of internet; World Wide Web; email. 5. Making a small presentation: MS PowerPoint	SP + AKA	24+12	February

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5th SEMESTER	CC-11-Research Methodology and Field Work Credits 06	Unit I: Research Methodology	1. Research in Geography: Meaning, types and significance. 2. Literature review and formulation of research design 3. Defining research problem, objectives and hypothesis. Research materials and methods 4. Techniques of writing scientific reports. Preparing notes, references, bibliography, abstract and keywords	TS	14	MARCH
		Unit II: Fieldwork	1. . Fieldwork in Geographical studies – Role and significance. Selection of study area and objectives. Pre-field preparations. Ethics of fieldwork 2. Field techniques and tools: Observation (participant, non participant), questionnaires (open, closed, structured, non-structured). Interview with special reverence to focused group discussions. 3. . Field techniques and tools: Landscape survey using transects and quadrants, constructing a sketch, photo and video recording. 4. Positioning and collection of samples. Preparation of inventory from field data. Post-field tasks.	AKA	35	MARCH
	C11P: Research Methodology and Field Work Lab	Practical Record (2 Credits)	1. 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 (mouza) or an urban area (municipal ward) based on cadastral or municipal maps to study specific problems. 2. The duration of the field work shall not exceed 10 days. 3. 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. 4. A copy of the bound report, duly signed by the concerned teacher, should be submitted	AKA	20	MARCH

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	CC-12: Remote Sensing and GIS	Unit II: Remote Sensing (2 Credits)	1. Principles of Remote Sensing (RS). Types of RS satellites and sensors 2. Sensor resolutions and their applications with reference to IRS and Landsat missions, image referencing schemes and data acquisition 3. Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data Principles of image interpretation 4. Preparation of inventories of landuse land cover (LULC) features from satellite images	TS	16	MARCH
		Unit III: Geographical Information Systems and Global Navigation Satellite Systems (2 Credits)	1.GIS data structures: types (spatial and non-spatial), raster and vector 2. Principles of preparing attribute tables, data manipulation and overlay analysis 3. Principles of GNSS positioning and waypoint collection 4. Transferring of waypoints to GIS. Area and length calculations from GNSS data	SP	24	MARCH
	CC-12 P- Remote Sensing and GIS Lab	Remote Sensing and GIS 2 Credits	1.Georeferencing of maps and images 2.Image enhancement. Preparation of reflectance libraries of LULC features across different image bands of IRS L3 or Landsat OLI data 3. Image classification, post-classification analysis and class editing 4. Digitisation of features. Data attachment, overlay and preparation of thematic map	SP	24	MARCH
5TH SEMESTER	DSE-1: Hydrology and Oceanography Credits 06	Hydrology Credits 02	1. Systems approach in hydrology. Global hydrological cycle: its physical and biological role 2.Run off controlling factors. Infiltration and evapotranspiration. Run off cycle 3. Drainage basin as a hydrological unit. Principles of water harvesting and watershed management 4. Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement	TS	24	MARCH
		Oceanography	1. Major relief features of the ocean floor: characteristics and origin according to plate tectonics 2. Physical and chemical properties of ocean water 3. Water mass, T–S diagram 4. Air-Sea interactions, ocean circulation, wave and tide 5. Ocean temperature and salinity : Distribution and determinants 6. Coral reefs: Formation, classification and threats 7. Marine resources: Classification and sustainable utilisation 8. Sea level change: Types and causes	AKA	48	MARCH

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H.O.D.
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	DSE-2: Resource Geography Credits 06	Unit I Credits 03	1. Natural Resources: Concept and classification 2. Approaches to Resource Utilization: Utilitarian, Conservational, Community based adaptive 3. Significance of Resources: Backbone of Economic growth and development 4. Pressure on resources. Appraisal and Conservation of Natural Resources 5. Problems of resource depletion—global scenario (forest, water, fossil fuels). 6. Sustainable Resource Development	AKA	36	MARCH
5th SEMESTER		Unit II 3 Credits	1. Distribution, Utilisation, Problems and Management of Metallic Mineral Resources: Iron ore, Bauxite, copper 2. Distribution, Utilisation, Problems and Management of Non-Metallic Mineral Resources: Limestone, Mica, Gypsum 3. Distribution, Utilisation, Problems and Management of Energy Resources: Conventional and Non-Conventional 4. Contemporary Energy Crisis and Future Scenario 5. Politics of Power resources 6. Limits to Growth and Sustainable Use of Resources; Concept of Resource sharing	AKA+TS	24+12	MARCH

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