

**CENTRE FOR DISTANCE AND ONLINE EDUCATION
JAMIA MILLIA ISLAMIA
NEW DELHI - 110025**

(A Central University by an Act of Parliament)



PROGRAMME PROJECT REPORT

M.A. / M.Sc. Geography

Syllabus (w.e.f. 2023-2024)

1. ABOUT THE PROGRAMME

1.1 Introduction of the Program

1.2 MA Geography is a highly coveted post-graduate programme that focuses on the human and physical characteristics of geography. Masters in geography involves rigorous coursework with an emphasis on research and fieldwork. It covers the subject matter in a comprehensive and scientific manner by studying subjects like physical environment, ecology, disaster management, climatology, natural resource management, planning etc. Students with a degree in Geography can find employment in many international job sectors. They can fulfill the role of an Agricultural Specialist, Geographer, Cartographer, Demographer, Forest Manager, Professor, Teacher.

1.3 Duration of the Programme

Minimum duration of the Programme: 4 (Four) Semesters / 02 (Two) Years

Maximum duration of the Programme: 8 (Eight) Semesters / 04(Four) Years

1.3 Medium of Instruction:

English / Hindi / Urdu *

(The SLM will be provided in English and Assignments and Question Papers will be provided only in English.)

1.4 Programme Fee

Rs. 12,000/- (Twelve Thousand) per Year (Two Semesters) to be paid in advance in the beginning of each academic year.

1.5 Brief Course Structure

Course Structure M.A. / M.Sc. Geography

SEMESTER - I

Paper	Course Code	Course Title	Credit	Type
Paper-I	DGGM-101	Geomorphology	4	CC
Paper-II	DGGM -102	Climatology	4	CC
Paper-III	DGGM -103	Geography of India	4	CC
Paper-IV	DGGM -104	Resource Geography	4	CC
Practical-I	DGGM -105	Cartographic Methods	2	CC
Practical-II	DGGM -106	Quantitative Methods in Geography	2	CC
	Total		20	

SEMESTER - II

Paper	Course Code	Course Title	Credit	Type
Paper-V	DGGM-201	Geographical Thought	4	CC

Paper-VI	DGGM -202	Environmental Geography	4	CC
Paper-VII	DGGM -203	Disaster Management	4	CC
Practical-III	DGGM -204	Remote Sensing GIS and GPS	2	CC
	Total		14	

SEMESTER – III

Paper	Course Code	Course Title	Credit	Type
Paper-VIII	DGGM-301	Urban Geography	4	CC
Paper-IX	DGGM -302	Geography of Water Resources	4	CC
Paper-X	DGGM -303	Population and Settlement Geography	4	CC
Practical-IV	DGGM -304	Geographical Information Systems	2	CC
Practical-V	DGGM -305	Digital Cartography	2	CC
	Total		16	

SEMESTER – IV

Paper	Course Code	Course Title	Credit	Type
Paper-XI	DGGM-401	Regional Development and Planning	4	CC
Paper-XII	DGGM -402	Geography of Health and Well-Being	4	CC
Paper-XIII	DGGM -403	Gender Geographies	4	CC
Practical-VI	DGGM -404	Project	8	CC
	Total		20	

GRAND TOTAL

Semester	Core Course (CC)			Choice Based (CB)	Skill Enhancement (SEC)	Ability Enhancement (AECC)	Total Papers	Credits
	Theory	Practical	Total					
I	04	02	06	0	-	-	06	20
II	03	01	04	0	0	-	04	14
III	03	02	05	0	-	0	05	18
IV	03	01	04	0	-	-	04	20
Total Papers	14	05	19	0	0	0	19	
Total Credits	52	12	64	0	0	0		64

1.6 Detailed Course Structure

The syllabus for M.A./M.Sc Geography or Master in Geography is designed to develop the skills and research acumen of post-graduate students. It focuses on the study of the socio-economic and physical environment, demography, landscape, population, urban settlement, regional planning and quantitative methodology. The syllabus may differ based on the university yet there are some common subjects-

M.A. / M.Sc. Geography Semester - I Credits: 4 (CC) Paper - I (DGGM - 101) Geomorphology

BLOCK - I: FUNDAMENTAL CONCEPTS

UNIT 1: Fundamental concepts in Geomorphology: Concept of time and space;
UNIT 2: Concept of morphogenetic regions; Concept of dynamic equilibrium;
UNIT 3: Models in Geomorphology; Recent trends in Geomorphology.

BLOCK - II: EVOLUTION OF LANDFORMS

UNIT 1: Significance of geological structures, climatic factors and the geomorphic processes in the evolution of landforms;
UNIT 2: Interruption in the evolution of landforms: Tectonic, climatic and base level changes; Slope Form, Processes and Evolution.

BLOCK - III: GEOMORPHIC PROCESSES AND LANDFORMS

UNIT 1: Drainage basin as geomorphic unit; Morphometric Laws; Morphometric analysis;
UNIT 2: Denudation and Morpho chronology;
UNIT 3: Soil erosion and its measurement.

- UNIT 4: Fluvial : Evolution of river valley;
UNIT 5: Glacial : Glaciations & Forms. Aeolian : Evolution of arid landscapes ;
UNIT 6: Coastal Geomorphology : Recession of shorelines and evolution of coastal landforms.

BLOCK - IV: APPLIED GEOMORPHOLOGY

- UNIT 1: Geomorphic hazards and mitigation;
UNIT 2: Geomorphology and Soils;
UNIT 3: Geomorphology in mineral and Groundwater prospecting;
UNIT 4: watershed management.

Books Recommended:

1. Dayal, P. 2015. Text-Book of Geomorphology, Shukla Book Depot, Patna.
2. Strahaler, A.H., 2013(6th edition). Introducing Physical Geography. Wiley Pub.
3. Thornbury, W.D., 1991. Principles of Geomorphology, Wiley Eastern Ltd., NewDelhi.
4. Savindra Singh. Fundamental Concepts in Geomorphology. Prayag Pustak Bhavan.

M.A. / M.Sc. Geography
Semester - II
Credits: 4 (CC)
Paper – II (DGGM - 102)
Climatology

BLOCK I: GENERAL CLIMATOLOGY

- UNIT- 1: Meaning, scope and objectives of climatology and its relations with meteorology.
UNIT- 2: Structure and composition of the atmosphere.
UNIT- 3: Heat budget and insolation. Atmospheric equilibrium, air masses and fronts.
UNIT- 4: Atmospheric disturbances: cyclones, tornadoes and water spouts.
UNIT- 5: Classification of climate by Trewartha, Koppen and Thornthwaite.

BLOCK II: APPLIED CLIMATOLOGY

- UNIT 1: Climate and biosphere.
UNIT 2: Climate and human environment: agricultural and industrial.
UNIT 3: Climate, urbanization and urban planning.
UNIT 4: Weather forecasting and recent trends in climatology.
UNIT 5: Air pollution, global warming and climatic change. Micro climates.

BLOCK III: GENERAL OCEANOGRAPHY

- UNIT 1: Meaning, scope and objectives of oceanography.
UNIT 2: Submarine topography and configuration of Pacific, Atlantic and Indian ocean floors.
UNIT 3: Ocean temperature and salinity.
UNIT 4: Ocean dynamics: currents, tides, tsunamis and EI Nino.
UNIT 5: Ocean deposits. Coral reefs.

BLOCK IV: APPLIED OCEANOGRAPHY

UNIT 1: Ocean routes and world economics.

UNIT 2: Marine resources and their conservation.

UNIT 3: Marine Pollution and ocean dumping.

UNIT 4: Global warming and transgression of seas.

UNIT 5: Remote sensing in oceanographic studies; Laws of the sea.

M.A. / M.Sc. Geography
Semester - I
Credits: 4 (CC)
Paper - III (DGGM - 103)
Geography of India

BLOCK I: REGION AND REGIONALIZATION

- UNIT 1: India as a Geographical Unit;
- UNIT 2: Concept of Region: Scheme of Regionalization: O.H.K. Spate and R.L. Singh,
- UNIT 3: Agro-Climatic Regions,
- UNIT 4: Watershed as a Planning Region.

BLOCK II: GEOGRAPHY OF INDO-GANGETIC PLAIN

- UNIT 1: Introduction to Indo-Gangetic Plain;
- UNIT 2: Upper Ganga: Physiography, Drainage, Climate, Soil; Population and Economy
- UNIT 3: Middle Ganga: Physiography, Drainage, Climate, Soil; Population and Economy
- UNIT 4: Lower Ganga Plains: Physiography, Drainage, Climate, Soil; Population and Economy

BLOCK III: GEOGRAPHY OF HIMALAYAS

- UNIT 1: Introduction to Himalayas;
- UNIT 2: The Regional Study of Himalayas: Physiography, Drainage, Climate, Soil, Natural Vegetation, Population and Economy.

BLOCK IV: GEOGRAPHY OF PENINSULAR INDIA

- UNIT 1: Introduction to Peninsular India;
- UNIT 2: A Geographical account of Chotanagpur: Physiography, Drainage, Climate, Soil; Population and Economy
- UNIT 3: Deccan plateau: Physiography, Drainage, Climate, Soil; Population and Economy.

M.A. / M.Sc. Geography
Semester - I
Credits: 4 (CC)
Paper - IV (DGGM - 104)
Resource Geography

BLOCK I: FUNDAMENTAL CONCEPTS

UNIT 1: Definitions and Scope of Economic Geography: its place in Human Geography,
UNIT 2: Development of the discipline after Second World War with special reference to New Economic Geography (NEG).

BLOCK II: THEORIES AND MODELS

UNIT 1: Agricultural Land Use – Ricardian Rent theory, Von Thunen’s rent theory with modern interpretations.
UNIT 2: Basic concepts in location problems; Demand, Scale, Agglomeration and Time dimension in Economic location; Locational Models of Weber and Isard.
UNIT 3: Christaller’s Central Place Theory and modifications by Losch.

BLOCK III: RESOURCE BASE OF THE ECONOMY

UNIT 1: Resource base of the Economy; Concept of Resources,
UNIT 2: Classification of Resources; Factors of Resource Creation; Resources and Environment scarcity and sustainability, conservation of resources;
UNIT 3: Sectors of the Economy: agriculture, manufacturing and tertiary activities.

BLOCK IV: TRADE AND EXCHANGE

UNIT 1: Concepts of trade and exchange – opportunity costs, absolute, comparative and competitive advantage;
UNIT 2: Movements of capital and labour; Core-periphery concept in trade; Commodities in world trade; Trade Blocs;
UNIT 3: The Information Economy – Spatial and transportation implications of e-commerce.

Books Recommended:

1. Hussain, M. 2008. Models in Geography. Rawat Publications.
2. Gautam, A. 2015. Geography of Resources: Exploitation Conservation And Management. Sharda Pustak Bhawan.
3. Peat, W.N. and Constant, J. A. 1972. Zimmermann’s World Resources and Industries. Harper and Row Publishers, London.

M.A. / M.Sc. Geography
Semester - I
Credits: 2 (CC)
Practical – I (DGGM - 105)
Cartographic Methods

BLOCK I: FUNDAMENTALS OF CARTOGRAPHY

UNIT 1: Maps and their significance.

UNIT 2: Classification of maps; Theory of communication;

UNIT 3: Elements of maps: Generalization, Symbolization and Classification.

UNIT 4: Techniques of mapping: dot, choropleth, isopleths and diagrammatic.

UNIT 5: Principles of map designing.

BLOCK: II RELIEF MAPPING

UNIT 1: Relative relief: GH Smith and Robinsons methods;

UNIT 2: Morphometric Analysis: Drainage Density, Stream order, Elongation ratio, Circularity ratio, Bifurcation ratio.

BLOCK: III MAPPING OF SOCIO-ECONOMIC DATA

UNIT 1: Population Density; Rural – Urban population;

UNIT 2: Patterns of irrigation,

UNIT 3: Location of Industries; Cartograms.

BLOCK: IV APPLIED CARTOGRAPHY

UNIT 1: Topographic mapping, Tourist mapping

UNIT 2: Service and utility mapping

M.A. / M.Sc. Geography
Semester - I
Credits: 4 (CC)
Practical – II (DGGM - 106)
Quantitative Methods in Cartography

BLOCK I: MEASURES OF GEOGRAPHICAL PATTERNS

- UNIT 1: Nearest Neighbour Analysis;
- UNIT 2: Gini's Co-efficient;
- UNIT 3: Lorenz curves;
- UNIT 4: Location quotient;
- UNIT 5: Rank size rule.

BLOCK II: NETWORK ANALYSIS

- UNIT 1: Indices of transport network efficiency;
- UNIT 2: Compositing the indices of transport network efficiency; Indices of nodal accessibility;
- UNIT 3: Local degree – Road Local degree - Rail.
- UNIT 4: Weighed road capacity and tortousrity ratio;
- UNIT 5: Compositing the indices of nodal accessibility.

BLOCK III: METHODS OF PREDICTIONS AND LEVELS OF MEASUREMENT

- UNIT 1: Methods of Predictions and Levels of measurement;
- UNIT 2: Methods of sampling; Simple linear regression analysis; Plotting of regression line;
- UNIT 3: Plotting of absolute and relative residuals;
- UNIT 4: Explanation of residuals plotted on the maps.

BLOCK IV: MEASURES OF DISPARITIES AND POTENTIAL MODELS

- UNIT 1: Gravity and potential models;
- UNIT 2: Delimitation of hinterlands; Combinational analysis of Weaver,
- UNIT 3: S.M. Rafiulla's method,
- UNIT 4: Measures of Disparities: Kendall's ranking method.

M.A. / M.Sc. Geography
Semester - II
Credits: 4 (CC)
Paper - V (DGGM - 201)
Geographical Thought

BLOCK I: GENESIS OF GEOGRAPHICAL THOUGHT

UNIT 1: Ancient Geography Contributions of Greek, Roman and Arab Geographers.

UNIT 1: Impact of voyages; Discoveries and Renaissance on Geographical Thought.

UNIT 1: Foundation of Scientific Geography (Contributions of Varenus and Kant).

BLOCK II: EVOLUTION OF MODERN GEOGRAPHICAL THOUGHT – I

UNIT 1: Classical period of modern geography contributions (Humboldt and Ritter) and Darwin's impact on Geography;

UNIT 2: Contributions of Ratzel and Blache;

UNIT 3: Shifting viewpoints in Geography during the latter half of Nineteenth Century.

BLOCK III: EVOLUTION OF MODERN GEOGRAPHICAL THOUGHT – II

UNIT 1: The debate between Determinist and Possibilists;

UNIT 2: Geography as science of relationships and as science of distributions.

UNIT 3: Geography as Chorological science and as Morphology of Landscape.

BLOCK IV: CONTEMPORARY GEOGRAPHY POST SECOND WORLD WAR

UNIT 1: Exceptionalism and the Schaefer-Hartshorne debate,

UNIT 2: Positivism and its reactions (behavioral and radical approaches).

UNIT 3: Post modernism and feminist Geography.

M.A. / M.Sc. Geography
Semester - II
Credits: 4 (CC)
Paper - VI (DGGM - 202)
Environmental Geography

BLOCK- I: Conceptual Context

UNIT 1: Environment: Definition and components;

UNIT 2: Environment as life- support system;

UNIT 3: Human and Environment Interaction;

UNIT 4: Environmental disorders: Human impact on land, climate, natural vegetation and non-renewable natural resources.

BLOCK- II: Environmental Issues

UNIT 1: Population dynamics and food security and disaster;

UNIT 2: Global problems: Global warming, ozone depletion and acid rain; Climate change, desertification;

UNIT 3: Local and Regional Problems: Extreme hydrological events, deforestation, pollution of air and water;

UNIT 4: Depletion of fresh water resources and degradation of soils.

BLOCK- III: Management Strategies

UNIT 1: Uncertainty in managing environmental problems: Uncertainty in risk assessment;

UNIT 2: Preservation and conservation; Integrated management, and community participation in management.

BLOCK- IV: Environmental Management

UNIT 1: Management of air and water resources;

UNIT 2: Management of soil and forest resources;

UNIT 3: Management of biodiversity; Management of habitats;

UNIT 4: population management; Management of disaster, and adaptation to climate change.

Books Recommended:

1. Adams, W.M.1995: Green development: Environmental sustainability in the ThirdWorld, London: Rout ledge.
2. Alexander, D. 1993: Natural Disasters, New Delhi: Research Press.
3. Allaby, M. 1996: Basics of Environmental science, London: Routlede.
4. Baarrshes, W.H. 1996: Eco-fiction: Understanding the Environmental Debate, London: Routledge.
5. Brayant, E.A.1991: Natural Hazards, Cambridge: Cambridge University press.
6. Canter,L. W.!996: Environmental Impact Assessment, 2nd edition, New Yprk: McGraw hill.
7. Chapman,D. 1994: Natural Hazards, Melbourne: Oxford University Press.
8. Chapman J.L. and Reiss, M.J. 1993: Ecology: Principles and applications, Cambridge: Cambridge University Press.
9. Colls, J.1997: Air Pollution: An Introduction, London: Chapman and Hall.

M.A. / M.Sc. Geography
Semester - II
Credits: 4 (CC)
Paper - VII (DGGM - 203)
Disaster management

BLOCK - I: Introduction

UNIT 1: Disaster: Definition and significance;
UNIT 2: Difference between Hazard and Disaster;
UNIT 3: Disasters: Nature, Types and Magnitude;
UNIT 4: Earthquakes, Cyclones, Tsunamis, Floods, Droughts, Landslides, Wars and Industrial Disasters.

BLOCK- II: Risk and Preparedness

UNIT 1: Concept of Risk and Vulnerability, Reduction of Risk,
UNIT 2: Techniques of Risk Assessment, People's Participation in Risk Assessment,
UNIT 3: National And Global cooperation in Risk Assessment;
UNIT 4: Disaster Preparedness; Concept and Nature;
UNIT 5: Community Based Planning,
UNIT 6: Role of Various Agencies and Government Organizations.

BLOCK- III: Planning and Management Integral

UNIT 1: Development Planning for Disaster Management,
UNIT 1: Pre-Disaster Planning and management; Early Warning and Prediction System;
UNIT 1: Post-Disaster Management: Rescue, Relief, Rehabilitation; Public Awareness,
UNIT 1: Stress Management, Role of National and International Agencies in Disaster Management.

BLOCK- IV: National Perspective

UNIT 1: Disaster Prone Areas of India; Seismic Zones,
UNIT 1: Areas prone to Floods and Droughts, Landslides and Avalanches,
UNIT 1: Areas prone to Cyclones and Coastal Hazards,
UNIT 1: Industrial Disaster Areas, National Disaster Policy of India.

Books Recommended:

1. Bryant Edwards (2005): Natural Hazards, Cambridge University Press, U.K.

2. Carter, W. Nick, 1991: Disaster Management, Asian Development Bank, Manila.
3. Central Water Commission, 1987, Flood Atlas of India, CWC, New Delhi.
4. Central Water Commission, 1989, Manual of Flood Forecasting, New Delhi.
5. Government of India, 1997, Vulnerability Atlas of India, New Delhi
6. Sahni, Pardeep et.al. (Eds.) 2002, Disaster Mitigation, Experiences and Reflections. Prentice Hall of India, New Delhi.

M.A. / M.Sc. Geography
Semester - II
Credits: 2 (CC)
Practical - III (DGGM - 204)
Remote Sensing, GIS and GPS

BLOCK I: BASICS OF REMOTE SENSING

- UNIT - 1: Stages in Remote Sensing data acquisition;
- UNIT - 2: Physics of Remote Sensing;
- UNIT - 3: Electro Magnetic Spectrum (EMS);
- UNIT - 4: EMR and its interaction with atmosphere and earth surface features.

BLOCK II: REMOTE SENSING PLATFORMS, SENSORS, AND SATELLITE SERIES

- UNIT - 1: Platforms: Types and their orbital characteristics;
- UNIT - 2: Sensors types: active and passive;
- UNIT - 3: Sensors systems: whiskbroom and push broom;
- UNIT - 4: Satellite series: IRS, SPOT, IKONOS and Quick bird.

BLOCK III: DIGITAL IMAGE PROCESSING

- UNIT - 1: Digital data formats;
- UNIT - 2: Image Restoration: geometric radiometric corrections and filtering.
- UNIT - 3: Image Enhancement: linear and non linear contrast stretch; Band combinations;
- UNIT - 4: Image Classifications: supervised and unsupervised.

BLOCK IV: GEOGRAPHIC INFORMATION SYSTEM AND GLOBAL POSITIONING SYSTEM

- UNIT- 1: Components of GIS;
- UNIT- 2: Data Structures;
- UNIT- 3: Data Base Management System (DBMS);
- UNIT- 4: Data Models; spatial data analysis and applications;
- UNIT- 5: Fundamentals of GPS; Segments of GPS; GPS Applications.

M.A. / M.Sc. Geography
Semester - III
Credits: 4 (CC)
Paper-VIII (DGGM - 301)
Urban Geography

BLOCK I: CONCEPTS AND APPROACHES TO THE STUDY OF URBAN GEOGRAPHY

- UNIT 1: Nature and scope of Urban Geography;
UNIT 2: Different Approaches; Development and Recent Trends in Urban Geography;
UNIT 3: Evolution of towns during the Ancient, Medieval and Modern periods.

BLOCK II: MORPHOLOGY AND CLASSIFICATIONS OF TOWNS

- UNIT 1: Morphology and Models of Internal Structures of cities;
UNIT 2: Functional Classification of towns;
UNIT 3: Hierarchy and Spacing of cities: Model of Christaller; Urban Fringe; Primate City and Megalopolis.

BLOCK III: QUALITY OF LIFE AND HEALTH

- UNIT 1: Economic Base of Cities; Physical, Economic, Social and Cultural component;
UNIT 2: Quality of Urban Life; Air Pollution and Public Health.

BLOCK IV: URBAN PLANNING

- UNIT 1: Urban transportation; transport and environmental degradation;
UNIT 2: Vehicular pollution and congestion;
UNIT 3: Urban planning in India with special reference to Chandigarh and Jaipur.

M.A. / M.Sc. Geography
Semester - III
Credits: 4 (CC)
Paper-IX (DGGM - 302)
Geography of Water Resources

BLOCK I: INTRODUCTION

- UNIT 1: Definition and scope of Hydrology,
- UNIT 2: Hydrological cycle, Structure and properties of water,
- UNIT 3: Inventory of earth's water resources,
- UNIT 4: Quality and quantity of available water, Water as a cyclic resource.

BLOCK II: SURFACE WATER DYNAMICS

- UNIT 1: Surface water: sources and factors affecting quality and quantity;
- UNIT 2: Precipitation: forms and factors;
- UNIT 3: Interception: factors; Runoff:
- UNIT 4: Sources and factors affecting runoff;
- UNIT 5: Evaporation: measurement and factors;
- UNIT 6: Evapotranspiration: control and factors.

BLOCK III: GROUND WATER DYNAMICS

- UNIT 1: Ground water: Characteristics of stream flow,
- UNIT 2: Darcy's Law, permeability, Infiltration, Ground water storage,
- UNIT 3: Ground water aquifers in different rock systems, movement and discharge.

BLOCK IV: WATER RESOURCE PROBLEMS

- UNIT 1: Environmental influences on water resources;
- UNIT 2: Sectoral demands for water; urban water supply;
- UNIT 3: Water management; water harvesting; water pollution and control.

M.A. / M.Sc. Geography
Semester - III
Credits: 4 (CC)
Paper-X (DGGM - 303)
Population and Settlement Geography

BLOCK I: CONCEPTUAL FRAMEWORK

- UNIT 1: Population Geography and Demography;
- UNIT 2: Approaches to Population Geography;
- UNIT 3: Sources of Census Population data;
- UNIT 4: History and Changing Methodology of Indian census taking.

BLOCK II: POPULATION DYNAMICS

- UNIT 1: Population change and growth; Historical trends of population growth;
- UNIT 2: Trends and patterns of fertility;
- UNIT 3: Trends and patterns of mortality;
- UNIT 4: Trends and patterns of child mortality;
- UNIT 5: Migration: Types, patterns, causes and consequences.

BLOCK III: POPULATION DISTRIBUTION AND REDISTRIBUTION

- UNIT 1: Population distribution in the world and India;
- UNIT 2: Patterns and Trends of population Redistribution: Urbanization in the developed and developing world;
- UNIT 3: Urbanization in India: Trend and pattern;
- UNIT 4: World population-resource regions: Ackerman's scheme; Prospects of habitation of non-ecumene regions.

BLOCK IV: POPULATION PROBLEMS AND POLICIES

- UNIT 1: Population: a problem (liability) or resource (asset);
- UNIT 2: Problem of Aging, Health –care and food security;
- UNIT 3: Critical appraisal of population policy of India;
- UNIT 4: Population in the context of environmental crises.

M.A. / M.Sc. Geography
Semester - III Credits: 2 (CC)
Practical - IV (DGGM-304)
Geographical Information Systems

BLOCK I: GIS SOFTWARE & DATA HANDLING

UNIT 1: User interface with GIS software: Arc View, Geo- media, ILWIS and Arc GIS;

UNIT 2: Software and hardware interface and limitations;

UNIT 3: Data input: spatial and non-spatial; Scanning and Digitizing; Data import and export.

BLOCK II: DATA TRANSFORMATION

UNIT 1: Data editing and cleaning; Projection and datum;

UNIT 2: Coordinate transformation; Georeferencing;

UNIT 3: Linking spatial and Non-spatial data;

UNIT 4: Data base creation; Attribute handling.

BLOCK- III: DATA BASE CREATION & DATA ANALYSIS

UNIT 1: Spatial analysis: overlay, buffer and proximity, network analysis;

UNIT 2: Creation of digital elevation models (DEM): contours and spot heights;

Determination of slope, aspect and hill shading;

UNIT 3: Data interpolation: point and line data; Output generation and layouts.

BLOCK IV: APPLIED GIS

UNIT 1: Application of GIS in Agriculture;

UNIT 2: Urban Planning and Management, Watershed management, Suitability Analysis

BOOKS:

1. Lo C. P. & Yeung A. K. W., (2004). Concepts and Techniques of GIS, Prentice-Hall of India, New Delhi.
2. Heywood I, Cornelius S, Carver S. (2000). Introduction to GIS. Addison WesleyLongman, New York.
3. Burrough P.A. and Rachael A. McDonnell. Principles of Geographic InformationSystems, 2nd Ed.
4. Masood A S, (2006). Introduction to GIS, Sharda Pustak Bhavan Allahabad.
5. Fazal. S. & Rahman A (2007). GIS Terminology, New Age International Publishers, New Delhi.
6. Fazal.S. (2008). GIS Basics, New Age International Publishers, New Delhi.
7. Leick A. (1995) GPS Satellite Surveying, 2nd Edition, John Wiley and Sons.
8. French. G.T. Understanding the GPS: An Introduction to the Global PositioningSystem.

M.A. / M.Sc. Geography
Semester - III
Credits: 2 (CC)
Practical- V (DGGM - 305)
Digital Cartography

BLOCK I: DIGITAL CARTOGRAPHY

UNIT 1: History and development of Digital cartography,

UNIT 2: Cartographic and GIS software, Digital cartography, web cartography,

UNIT 3: Computer Aided Design (CAD), Spatial registration; spatial and non spatial data entry.

BLOCK II: DIGITAL MAPPING

UNIT 1: Land use mapping (Choropleth mapping),

UNIT 2: Terrain mapping (isolines); urban land use mapping (Choropleth); Dot mapping.

BLOCK III: DIGITAL MAP ANALYSIS

UNIT 1: Overlay analysis; buffer analysis;

UNIT 2: Network analysis; nearest neighbor analysis, 3D modeling.

BLOCK IV: MAP DESIGNING

UNIT 1: Map designing and layout creation.

M.A. / M.Sc. Geography
Semester - IV
Credits: 4 (CC)
Paper-XI (DGGM – 401)
Regional Development and Planning

BLOCK I: BASIC CONCEPTS

UNIT 1: Region: Concepts and types; Formal and functional;

UNIT 2: Delineation of region.

UNIT 3: Development and Planning: Concepts, need and scope; Types of planning.

BLOCK II: FRAMEWORK OF DEVELOPMENT AND PLANNING

UNIT 1: Regional devolvement: concepts, levels, and indicators;

UNIT 2: Regional Planning: concepts and scope; Levels of planning: local, regional, national and multi-level; Master Plans;

UNIT 3: Environmental issues in regional planning; Planning for sustainable development.

BLOCK III: THEORIES AND MODELS

UNIT 1: Theories and models of the regional development: Hirschman's model;

UNIT 2: Growth centers and Growth pole theory of Perroux, Rostow's model; Gunnar Myrdal model.

BLOCK IV: PLANNING AND REGION

UNIT 1: Five Year Plans: command area development, planning for backward area, desert drought prone, hill and tribal area development;

UNIT 2: Decentralized planning and Panchayati raj;

UNIT 3: Watershed management; Regional economic imbalances and inequalities in India;

UNIT 4: SEZs in regional development.

M.A. / M.Sc. Geography
Semester - IV
Credits: 4 (CC)
Paper-XII (DGGM – 402)
Geography of Health and Well-Being

BLOCK I: CONCEPTS, APPROACHES AND DETERMINANTS

UNIT 1: Basic Concepts, Scope and significance of Health, Disease and Wellbeing;
UNIT 2: Approaches to the Study of Health Geography: Ecological, Social and Spatial;
UNIT 3: Approaches to the Study of Wellbeing: Need-based, Relative Standard and Capability;
UNIT 4: Geographical Factors affecting Human Health and Wellbeing.

BLOCK II: DISEASES AND THEIR TYPOLOGY

UNIT 1: WHO Classification of Diseases and their Major Types: Genetic; Communicable and Non-Communicable.
UNIT 1: Occupational and Deficiency Diseases; Epidemics and Pandemic.

BLOCK III: GLOBAL PATTERNS OF HUMAN HEALTH AND WELLBEING

UNIT 1: Ecology, Etiology, Diffusion and Distribution Pattern of Malaria, Tuberculosis, Hepatitis, AIDS, Glycemia and Cardiovascular Diseases;
UNIT 2: Poverty; Food Security; Nutrition Deficiency;
UNIT 3: Health and Sanitation Facilities.

BLOCK IV: INTERNATIONAL AND NATIONAL CONCERNS

UNIT 1: Role of WHO, UNICEF, Red Cross;
UNIT 2: Indian Health Care Planning: Child and Family Health Welfare, Immunization,
UNIT 3: Rural Health and Health for All Programmes,
UNIT 4: National Health Care Infrastructure; Health GIS.

M.A. / M.Sc. Geography
Semester - IV
Credits: 4 (CC)
Paper-XIII (DGGM - 403)
Gender Geography

BLOCK I: CONCEPTS AND APPROACHES

UNIT 1: Feminism and feminist movement,

UNIT 2: Feminist epistemology, scope, nature and development of gender geography.

BLOCK II: ATTRIBUTES OF FEMALE POPULATION

UNIT 1: Quality of life among female in the developed and developing countries;

UNIT 2: Sex-ratio and child and maternal mortality rate, Literacy and education;

UNIT 3: Status of females in the society in Development and Developing countries with special reference to India.

BLOCK III: FEMALE PARTICIPATION IN ECONOMIC ACTIVITIES

UNIT 1: Gender and Work: Historical developments in the sexual division of labour,

UNIT 2: Crime against women with special reference to domestic violence;

UNIT 3: Participation in economic activities: Primary, Secondary and Tertiary Sector,

UNIT 4: Domestic work and its significance.

BLOCK IV: EMPOWERMENT OF WOMEN

UNIT 1: Empowerment of women: education, economic opportunities, access to health services;

UNIT 2: Involvement in decision making processes from local bodies to parliaments: Role of women in development,

UNIT 3: environmental management and disaster management.

M.A. / M.Sc. Geography
Semester - IV
Credits: 8 (CC)
Practical-VI (DGGM - 404)
Project

BLOCK I: PROJECT