GEOGRAPHY

Course Outcome

Semester I

1. GEOMORPHOLOGY (Theory - MJC-I T)

- Understand fundamental concepts of geomorphology and the origin of Earth.
- Grasp geomorphic processes and their natural and anthropogenic influences.
- Analyze structure, stages, and types of landform evolution and geomorphic processes.

2. GEOMORPHOLOGY (Practical - MJC-I P)

- Identify various rocks and minerals.
- Interpret topographical maps using conventional signs and contour lines.

Semester II

1. CLIMATOLOGY & OCEANOGRAPHY (Theory - MJC-2 T)

- Understand atmospheric structure and composition.
- Grasp climatic classification systems and climate change.
- Understand ocean relief and physical oceanography.

2. CLIMATOLOGY & OCEANOGRAPHY (Practical - MJC-2 P)

- Interpret weather phenomena through graphs and meteorological instruments.
- Analyze spatial weather conditions.

Semester III

1. ECONOMIC GEOGRAPHY (Theory - MJC-3 T)

- Distinguish economic activity types and their spatial distribution.
- Understand location theories (Von Thünen, Weber).
- Explore trade routes, SEZs, and international trade structures.

2. CARTOGRAMS, MAP PROJECTION, AND SURVEYING (Theory - MJC-4 T)

- Understand cartographic conventions and map projections.
- Learn principles of surveying.

3. CARTOGRAMS, MAP PROJECTION, AND SURVEYING (Practical - MJC-4 P)

- Construct diagrams and projections.
- Conduct Prismatic Compass Survey and interpret maps.

Semester IV

1. HUMAN GEOGRAPHY (MJC-5 T)

- Understand human-environment interactions.
- Analyze population, races, tribes, and urban/rural settlements.

2. GEOGRAPHY OF INDIA AND BIHAR (MJC-6 T)

- Understand India’s physical, cultural, and economic geography.
- Analyze Bihar's physiography, resources, and demographics.

3. STATISTICAL METHODS IN GEOGRAPHY (Theory - MJC-7 T)

- Grasp data types, central tendency, dispersion, correlation, and regression in geography.

4. STATISTICAL METHODS IN GEOGRAPHY (Practical - MJC-7 P)

- Present and analyze statistical data using graphs and correlation methods.

Semester V

1. ENVIRONMENTAL GEOGRAPHY (MJC-8 T)

- Understand environmental concepts and ecosystems.
- Analyze pollution, degradation, natural hazards, and environmental policies.

2. CARTOGRAPHIC TECHNIQUES (Theory - MJC-9 T)

- Learn cartographic design, scale construction, and weather map interpretation.

3. CARTOGRAPHIC TECHNIQUES (Practical - MJC-9 P)

- Construct maps and projections.
- Interpret topographical and weather maps.

Semester VI

1. EVOLUTION OF GEOGRAPHICAL THOUGHT (MJC-10 T)

- Trace development of geographical thought and major contributors.
- Understand paradigms and contemporary trends.

2. RESEARCH METHODOLOGY AND FIELD WORK (MJC-11 T)

- Understand research techniques, field methods, and report writing.

3. REMOTE SENSING AND GIS (Theory - MJC-12 T)

- Grasp image processing and applications in land use/land cover analysis.

4. REMOTE SENSING AND GIS (Practical - MJC-12 P)

- Gain hands-on experience with GIS software for spatial data analysis and mapping.

Semester VII

1. REGIONAL PLANNING AND DEVELOPMENT (MJC-13 T)

- Understand regional concepts, planning models, and developmental policies.

2. RESEARCH METHODOLOGY (MJC-14 T)

- Elaborated earlier in Semester VI

3. DISASTER MANAGEMENT (Theory - MJC-15 T)

- Analyze natural and manmade disasters, their impacts, and mitigation.

4. DISASTER MANAGEMENT (Practical - MJC-15 P)

- Conduct fieldwork and prepare project reports on disaster events.

5. SOCIAL GEOGRAPHY (MJC-16 T)

- Explore social categories, welfare, inclusion/exclusion, and social planning.

Programme Outcome (PO)

B.A./B.Sc. Geography (CBCS – NEP 2020)

The **Undergraduate Programme in Geography** is designed to provide students with a robust understanding of physical, human, and applied aspects of geography. It aims to develop analytical thinking, spatial awareness, fieldwork proficiency, and technical skills in mapping and geospatial technologies. Upon completion of the program, students will be able to:

1. Disciplinary Knowledge

- Acquire comprehensive knowledge of physical geography (geomorphology, climatology, oceanography), human geography, and regional studies including India and Bihar.
- Understand foundational theories and contemporary issues in economic, environmental, and social geography.

2. Analytical and Theoretical Understanding

- Critically analyze and apply key geographical theories such as Von Thünen's, Weber's, Christaller's, and paradigms in geographical thought.
- Interpret human-environment interactions and assess socio-economic, cultural, and environmental dynamics.

3. Practical and Technical Skills

- Demonstrate proficiency in cartographic techniques, map projections, surveying, and statistical analysis.
- Utilize tools like remote sensing, GIS, and GPS to process, interpret, and represent spatial data.

4. Field and Research Skills

- Design and conduct field surveys using qualitative and quantitative research methods.
- Prepare detailed field reports and engage in project-based learning through disaster management and regional case studies.

5. Environmental and Social Sensitivity

- Recognize environmental challenges such as pollution, climate change, and biodiversity loss.
- Understand social structures and processes including caste, tribe, religion, and welfare geography, fostering inclusive and ethical perspectives.

6. Problem-Solving and Decision-Making

- Apply geographical knowledge to solve real-world problems related to regional planning, disaster risk reduction, and resource management.
- Make informed decisions supported by data analysis and spatial evidence.

7. Communication and Presentation Skills

- Communicate geographic ideas effectively using written reports, presentations, diagrams, and maps.
- Present statistical and spatial information using professional software and conventional cartographic tools.

8. Lifelong Learning and Career Readiness

- Prepare for competitive exams (e.g., UPSC, BPSC, NET), higher education, or employment in teaching, urban planning, GIS industries, and research.
- Develop skills for lifelong learning through the integration of technology, data handling, and analytical reasoning.

Crosscutting Issues in the Geography Curriculum

1. Professional Ethics

Courses Involved:

- **Research Methodology and Field Work (MJC-11 T, MJC-14 T)**
- **Disaster Management (MJC-15 T & P)**

Integration:

- Encourages ethical research practices including consent, transparency, and data integrity.
- Promotes professional behavior during fieldwork and disaster response.
- Develops responsibility in handling sensitive socio-economic and environmental data.

2. Gender Sensitivity

Courses Involved:

- **Human Geography (MJC-5 T)**
- **Social Geography (MJC-16 T)**
- **Geography of India and Bihar (MJC-6 T)**

Integration:

- Discusses gendered dimensions of population, migration, and settlement patterns.
- Analyses disparities in access to resources, education, health, and employment.
- Encourages inclusive urban and rural planning to ensure gender equity.

3. Human Values

Courses Involved:

- **Human Geography (MJC-5 T)**
- **Regional Planning and Development (MJC-13 T)**
- **Disaster Management (MJC-15 T & P)**

Integration:

- Emphasizes empathy towards marginalized communities (tribes, slum dwellers, disaster victims).
- Reinforces values like community cooperation, equity, justice, and social responsibility.
- Encourages students to engage in community-focused projects that uphold dignity and respect.

4. Environmental and Sustainability Awareness

Courses Involved:

- **Environmental Geography (MJC-8 T)**
- **Remote Sensing and GIS (MJC-12 T & P)**
- **Climatology & Oceanography (MJC-2 T & P)**

Integration:

- Explores sustainable resource management and biodiversity conservation.
- Equips students to use technology (GIS/RS) for environmental monitoring.
- Promotes awareness of global climate change, pollution, and ecological degradation.
- Discusses environmental laws and policies promoting sustainability.

5. Civic Responsibility & Policy Awareness

Courses Involved:

- **Geography of India and Bihar (MJC-6 T)**
- **Regional Planning and Development (MJC-13 T)**

Integration:

- Enhances understanding of planning systems, governance (Panchayati Raj), and public policy.
- Encourages active citizenship and participation in local development initiatives.
- Informs students about national programs related to rural development, urbanization, and disaster preparedness.

Conclusion

The Geography curriculum is deeply intertwined with critical societal issues. It not only builds academic competence but also shapes responsible, ethical, and environmentally conscious citizens. These crosscutting themes foster **holistic learning** and align with the goals of the **National Education Policy (NEP) 2020**.