

As Per NEP 2020

University of Mumbai



Syllabus for Basket of OE	
Board of Studies in GEOGRAPHY	
UG Second Year Programme	
Semester	IV
Title of Paper	Credits
I) Biogeography	2
From the Academic Year	2025-2026

Title of Paper :- Biogeography

Sr. No.	Heading	Particulars
1	Description of the course : Including but not limited to :	The open elective course on “Biogeography” is designed for second-year undergraduate students across all faculties and offers a comprehensive 30-hour learning experience for 2 credits. The course is aimed at introducing students to the essential concepts and principles governing the distribution of life on Earth. Biogeography explores how physical and environmental factors influence the patterns of plant and animal life across different regions of the world. In today's world, where environmental changes are accelerating due to climate change, deforestation, and human activities, understanding biogeography is more relevant than ever. The course equips students with the knowledge to analyse the spatial distribution of species, ecosystems, and biomes, thus fostering a deeper understanding of global environmental challenges. The knowledge gained from this course can be applied in various fields such as environmental science, conservation biology, forestry, wildlife management, and sustainable development. Understanding biogeography also aids in the application of Geographic Information Systems (GIS) for mapping ecosystems and studying the spatial distribution of species. As the world grapples with pressing environmental issues, there is a growing demand for professionals with expertise in biodiversity conservation, environmental management, and sustainable development. Industries such as forestry, wildlife conservation, environmental consultancy, and NGOs focused on environmental protection are increasingly seeking individuals with knowledge of biogeography. Graduates of this course can explore careers as environmental consultants, conservationists, wildlife managers, and GIS analysts, or work with government agencies and international organisations on biodiversity conservation projects. Moreover, the growing field of ecotourism also opens avenues for students interested in promoting sustainable tourism while preserving biodiversity.
2	Vertical :	Open Elective
3	Type :	Theory
4	Credit:	2 credits (1 credit = 15 Hours for Theory)
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: (List some of the course objectives) 1. To introduce the fundamental concepts, significance, and approaches of biogeography. 2. To examine the evolution, classification, and adaptive patterns of plants and animals across different regions. 3. To understand the principles of energy flow in ecosystems through food webs, biogeochemical cycles, and trophic dynamics. 4. To explore biogeographic divisions, with a focus on India's floristic and zoogeographic regions, and analyze factors influencing species migration and distribution. 5. To develop awareness of biodiversity conservation, including threats, strategies, legislation, and the role of key institutions in protecting ecosystems	

8	Course Outcomes: (List some of the course outcomes) On successful completion of this course, students will be able to: 1. Define and explain the significance of biogeography, applying analytical approaches to study species distribution. 2. Demonstrate an understanding of plant and animal evolution, classification, and adaptation patterns across different biogeographic regions. 3. Analyze energy flow in ecosystems by interpreting food webs, biogeochemical cycles, and the factors maintaining ecosystem balance. 4. Identify and describe major floristic and zoogeographic divisions, with a special focus on India. 5. Evaluate biodiversity conservation strategies.
9	Modules:- Module 1: Fundamentals of Biogeography (15 hours) 1.1 Biogeography: Definition, Nature and Scope its significance and relevance 1.2 Major approaches of Biogeography: Historical, ecological, and analytical 1.3 Evolution of Plants and Animals - Classification and characteristics 1.4 Ecosystem: Concept of ecosystem, Food chain, Food web and biogeochemical cycle Module 2: Biogeographic Divisions and Biodiversity (15 hours) 2.1 Ecological Communities – forest, Grassland, Desert, Mountain, Island and Equatic 2.2 Floristic and Zoogeographic Divisions of India, Major realms and regions 2.3 Factors of influencing migration, dispersal and distribution 2.4 Biodiversity Concept, threats and Conservation (with special reference to India)
10	Text Books: 1. Singh, Savindra. (2014) Biogeography, Pravalika Publications, Prayagraj. 2. Gautam, Alka. (2010) Environmental Geography, Sharda Pustak Bhavan, Prayagraj. 3. Bharucha, F.R. (1983): A textbook of the plant geography of India, Oxford University Press, Bombay. 4. वाणी, बा., कुडनार, पो., पाटील. नि. आणि निकम, सु. (२०२०) पर्यावरण भूगोल, अथर्व पब्लिकेशन्स 5. अनिगुटे (२०११) जैविक भूगोल, विद्या बुक पब्लिशर्स
11	Reference Books: 1. Brown, J. H., & Lomolino, M. V. (1998). <i>Biogeography</i>. Sinauer Associates. 2. Cox, C. Barry, Moore, P. D., & Ladle, R. J. (2016). <i>Biogeography: An Ecological and Evolutionary Approach</i> (9th ed.). Wiley-Blackwell. 3. Darlington, P. J. (1957). <i>Zoogeography: The Geographical Distribution of Animals</i>. Wiley. 4. Huggett, R. J. (2004). <i>Fundamentals of Biogeography</i> (2nd ed.). Routledge. 5. Krebs, C. J. (2008). <i>Ecology: The Experimental Analysis of Distribution and Abundance</i> (6th ed.). Pearson. 6. Lomolino, M. V., Riddle, B. R., & Whittaker, R. J. (2017). <i>Biogeography</i> (5th ed.). Sinauer Associates. 7. MacDonald, Glen (2003). <i>Biogeography: Introduction to Space, Time, and Life</i>. Wiley. 8. Sharma, P. D. (2012). <i>Ecology and Environment</i>. Rastogi Publications. 9. Singh, S. (2007). <i>Environmental Geography</i>. Prayag Pustak Bhawan. 10. Whittaker, R. J., & Fernández-Palacios, J. M. (2007). <i>Island Biogeography: Ecology, Evolution, and Conservation</i>. Oxford University Press.

12	Internal Continuous Assessment: 40%	External, Semester End Examination Individual Passing in Internal and External Examination: 60%
13	Continuous Evaluation through: Quizzes, Class Tests, presentations, projects, role play, creative writing, assignments etc.(at least 3) Internal Continuous Assessment of 20 Marks 1. One Assignment/Project work/Case study /Presentation /Seminar /Field visit report/Book review etc. to be conducted in the given semester before the Semester end examination. (Marks – 10) 2. One online/ offline class test (Marks – 5) 3. Active participation in regular class instructional deliveries and fieldwork. & Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing environment-related activities (Marks – 5)	Semester-End Examination of 30 Marks 1. This examination shall be of a 1-hour duration. Maximum marks 30. 2. There shall be two questions each of 15 marks. 3. All questions shall be compulsory with internal choice within the questions. (Each question will be of 15 marks with options.)
14	Format of Question Paper: for the final examination Q. 1. Based on Module – 1 & 2 (15 Marks) Q. 2. Based on Modules 3 & 4 (15 Marks)	

Sd/-

Sign of the BOS
Chairman

Dr. Rajaram B. Patil

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Dean

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