DEPARTMENT OF GEOGRAPHY
SEMESTER-V
Category II
Geography Courses for Undergraduate Programme of study with Geography as one of the Core Disciplines
(B.A. Programmes with Geography as Major discipline)
CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

DISCIPLINE SPECIFIC CORE COURSE – ENVIRONMENT AND ECOLOGY (DSC 9)

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit Distribution of the course			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
ENVIRONMENT AND ECOLOGY	4	3	1	0	Class 12th	NIL

Learning Objectives:

1. Various dimensions of ecology and ecosystems, their spatial distribution.
2. To learn about the global environmental challenges and management
3. To know about regional environmental challenges.
4. Understanding of environmental governance.

Learning Outcomes:

1. Detailed exposure to the concept of ecology, ecosystem, processes, theories and concepts.
2. In-depth knowledge of anthropogenic interventions and impacts, conservation strategies and planning.
3. Understanding the environmental concerns at global and regional level.
4. Evaluation and achievement of different environmental programs, policies and legislations.

Course Outline:

Unit-1 Introduction: (7 hrs)

- Concept of Environment, Ecology and Ecosystem; Types of Ecology; Concepts of Ecosystem Services; Ecological and Material Footprint; Global Planetary Boundaries.

Unit-2 Ecology and Ecosystem: (9 hrs)

- Species Interactions; Ecological Limiting Factors; Ecosystem: Structure and Functions; Human Adaptation

Unit-3 Global Environmental Challenges and Management: (11 hrs)

- Climate Change,Biodiversity loss, Land degradation and Human health issues

Unit-4 Regional Ecological Issues and Management: (11 hrs)

- Coastal and Marine Ecology: Loss of mangroves and corals, Garbage Patches; Urban Ecology: Waste disposal and Pollution

Unit-5 Programmes and Policies: (7 hrs)

- Environmental Impact Assessment; Global andNational Environment Policy of India

Readings:

- Brewster, E. N. 2010. Climate Change Adaptation: Steps for a Vulnerable Planet, New York, Nova Science.
- Cain, M.L., Bowman, W.D. and Hacker S.D. (2011). Ecology, 2nd Edition, Sinauer Associates Inc.
- Chandna R. C., 2002: *Environmental Geography*, Kalyani, Ludhiana.
- Chapman, J.L.& M.J. Reiss. (1998). Ecology: Principles and Applications. Cambridge Univ. press.
- Cunninghum W. P. and Cunninghum M. A., 2004: *Principals of Environmental Science: Inquiry and Applications*, Tata Macgraw Hill, New Delhi.
- Das, R. C., 1998. The Environmental Divide: The Dilemma of Developing Countries, A.P.H. Pub., New Delhi.
- Freedman, Bill. 1995. Environmental Ecology: The Ecological Effects of Pollution, Disturbance, and Other Stresses, Academic Press. London.
- Global Environment Monitoring UNEP, https://wesr.unep.org/article/global-environment-monitoring
- Global Environmental Outlook Reports UNEP https://www.unep.org/geo/ Intergovernmental Panel on Climate Change IPCC Reports(2021-23) https://www.ipcc.ch/report/ar6/wg2/