

DISCIPLINE SPECIFIC ELECTIVE COURSE – GEOGRAPHY OF HIMALAYAS (DSE 3)

Course title& Code	Credits	Duration (Hrs per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
GEOGRAPHY OF HIMALAYAS	4	3	1	0	Class 12th	NIL

Learning Objectives:

- Understanding the importance of the Himalayan Mountains.
- Various aspects of the physical and human geography of the Himalayan mountain ranges.
- Understanding of climate change adaptation practices and initiatives by international and national agencies and communities.

Learning outcomes:

- To enable understanding of origin and, Political-Climatological-Social-Spiritual-Ecological significance of the Himalayan Mountain ranges.
- To understand the distinct physiography, climatology, hydrology, population dynamics, livelihood options, and developmental activities in the Himalayan Mountain ranges.
- To appreciate climate change and human activities-led impacts in the Himalayan region and related initiatives to cope up with these impacts.

Course Outline

Unit 1: Understanding Himalayan Mountains: (5 hrs)

- Origin, Climatological-Social-Spiritual-Ecological significance.

Unit 2: Geography of the Himalayas: (11 hrs)

- Geology and Physiography; soils and vegetation; Climates and River Systems of the Himalayas

Unit 3: Population dynamics: (11 hrs)

- Demographic indicators, population, livelihood options and, developmental activities in the Himalayan Region

Unit 4: Climate change and human-induced impacts: (10 hrs)

- Environmental degradation, Hydro-meteorological and geo-environmental disasters; glacial recession; Land use change, deforestation and biodiversity loss

Unit 5: Policy Initiatives and Disaster Mitigation: (8 hrs)

- Climate Change Adaptation Practices, Disaster Risk Reduction, Role of International and National Institutions, Community-based eco-friendly practices

Readings

- Funnell, D. C., & Price, M. F. (2003). Mountain geography: a review. *The Geographical Journal*, 169(3), 183–190.
 - Hund, A. J., & Wren, J. A. (2018). *The Himalayas: An Encyclopedia of Geography, History, and Culture*. ABC-CLIO/Greenwood Press.
 - Ives, J. D. (1987). The theory of Himalayan environmental degradation: its validity and application challenged by recent research. *Mountain Research and Development*, 7, 189.
 - Ives, J., & Messerli, B. (2003). *The Himalayan Dilemma: Reconciling Development and Conservation*. The United Nations University (UNU) Routledge.
<https://doi.org/https://doi.org/10.4324/9780203169193>
 - Kohler, T., & Maselli, D. (2009). Mountains and Climate Change: From Understanding to Action. *Published by Geographica Bernensia with the Support of the Swiss Agency for Development and Cooperation (SDC), and an International Team of Contributors. Bern.*
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- Pandit, M. K. (2017). *Life in the Himalaya: An Ecosystem at Risk*. Harvard University Press.
 - Price, M. F., Byers, A. C., Friend, D. A., Kohler, T., & Price, L. W. (Eds.). (2013). *Mountain Geography*. University of California Press.
<https://doi.org/https://doi.org/10.4324/9780203169193>
 - Schickhoff, U., Singh, R. B., & Mal, S. (2022). *Mountain Landscapes in Transition: Effects of Land Use and Climate Change*. Springer Nature.
<https://doi.org/https://doi.org/10.1007/978-3-030-70238-0>
 - Singh, R. B., Schickhoff, U., & Mal, S. (2016). Climate change, glacier response, and vegetation dynamics in the Himalaya: Contributions toward future earth initiatives. In *Climate Change, Glacier Response, and Vegetation Dynamics in the Himalaya: Contributions Toward Future Earth Initiatives*. Springer Cham.
<https://doi.org/10.1007/978-3-319-28977-9>
 - Valdiya, K. S. (1998). Dynamic Himalaya. In *Gondwana Research* (pp. 1–178). Jawaharlal Nehru Centre for Advanced Scientific Research.
[https://doi.org/10.1016/s1342-937x\(05\)70174-x](https://doi.org/10.1016/s1342-937x(05)70174-x)
 - Valdiya, K. S. (2015). *The Making of India: Geodynamic Evolution*. Springer International Publishing.
 - Wester, P., Mishra, A., Mukherji, A., & Shrestha, A. B. (2019). The Hindu Kush Himalaya Assessment. In *The Hindu Kush Himalaya Assessment*. Springer Cham.
<https://doi.org/10.1007/978-3-319-92288-1>