

Detailed Syllabus

Curriculum Designed for		Grant-In-Aid
Semester: I	Course No.: 114	Course Code: MDC-GEO Course Title: Lithospheric Hazards
Credits:	04	Course Category: MDC

Course Objectives:

Number	Objective
Objective 1:	To introduce the concept, nature and scope of lithospheric hazards and their relevance in Geography.
Objective 2:	To develop an understanding of basic earth structure and the theory of plate tectonics.
Objective 3:	To explain the causes, types and spatial distribution of major endogenic hazards.
Objective 4:	To examine exogenic hazards.
Objective 5:	To analyze the environmental and socio-economic impacts of lithospheric hazards and their implications for sustainable development.
Objective 6:	

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO1	REMEMBERING	Define and describe the concepts of lithospheric hazards, disaster, risk and vulnerability.
CO2	UNDERSTANDING	Explain the structure of the Earth and the mechanism of plate tectonics.
CO3	APPLYING	Identify and interpret different types of lithospheric hazards and their spatial distribution.
CO4	ANALYSING	Analyze the causes and impacts of earthquakes, volcanoes, tsunamis and other hazards.
CO5	EVALUATING	Evaluate the socio-economic consequences of lithospheric disasters and their threat to sustainable development.
CO6	CREATING	Propose suitable risk management and mitigation strategies for reducing the impact of lithospheric hazards.

Course Contents:

Unit No.	Unit Contents	Sessions Allotted
1	Introduction to Lithospheric Hazards: Meaning, nature and scope of lithospheric hazards, Difference between hazard, disaster, risk and vulnerability, Structure of the Earth: Crust, Mantle, Core , Basics of Plate Tectonics.	15
2	Earthquakes, Volcanoes & Tsunamis, – types, causes, distribution and environmental and socioeconomic impact, challenge and threat posed to Sustainable Development	15
3	Lithospheric Hazards caused by External Factors, Landslides, Mass Wasting, Subsidence and Avalanches – types, causes, distribution and environmental and socioeconomic impact, challenge and threat posed to Sustainable Development	15
4	Socio-Economic Impact of Lithospheric Disasters, their Risk Management and Mitigation – loss of lives, economic losses in the form of assets and community income due to lithospheric disasters, their Risk management, short term and long term Mitigation strategies for lithospheric disasters.	15

REFERENCES:

- 1) Keller, E. A and DeVecchio, D. E. (2008) : Routledge
- 2) Rajiv Bhansal (2021) □□□□ □□□□ (□□□) SBPD Publication
- 3) Ram Suresh and Yadav P.G. (1998) : Bhautik Bhugol, Uni. Granth Nirman Board
- 4) Shah, M.R.: Bhautik Bhugol, Uni. Granth Nirman Board
- 5) Singh, Savindra (2005) : Physical Geography, Pravalika Publications

E Resources: 1. https://www.iris.edu/hq/about_iris/
2. <https://earthquake.usgs.gov/education>
3. <https://web.ics.purdue.edu/~braile/educindex/educindex.htm>