

Introduction

NHDM is an inter and multi-disciplinary field of knowledge developed as a decision support science with convergence of a wide range of disciplines of natural, social, computational and management and sciences with philosophy and humanities. Therefore, its scope is as wide as the ambit of geography itself, which justifies its importance for students of Geography.

Teaching Objectives

The overarching aim of this course is to value addition in the scheme of studies of BS Geography programme. Whereas specific objectives are to:

- i) introduce students with basic concepts of natural hazards and disaster management and how it developed as an important academic discipline important to understand development issues in geographical context;

- ii) Enable students to decipher the dynamics and trickledown impacts of natural hazards on life support system of earth and enable them to strive for remedial measures.
- iii) Familiarize students with current challenges of sustainable development at local and global level.

Learning Outcome

- i) Learners become aware about the impacts of natural hazards on environment and human activities.
- ii) Learners acquired skills to contribute towards sustainable development.
- iii) To aware students with the orientation of natural hazards in present times.

Course Outline

a) Introduction

- Basic concept of natural hazards.
- Classification of natural hazards.

b) Classification of Disasters

- Natural Disasters
- Floods
- Desertification
- Anthropogenic Disasters
- Air pollution
- Water pollution
- Deforestation
- Qasi-natural Disasters
- Global Warming

c) Significance of Disaster Planning and Management

- Nature and Scope of Disaster Management
- Management and importance
- Disaster Management Cycle and its components

d) Emerging Challenges and Disaster Management in Urban Areas

- Eco-friendly Urban Growth
- Population Growth
- Sustainable Urban Management

e) Sustainable Development and natural disasters

- Concepts of Sustainable Development and Relationship between Disasters.

• Challenge for Pakistan

Recommended Books:

1. Environmental Science: Earth as a Living Planet, Botkin, D.B & Keller, E.A. 6th Ed. John Wiley & Sons, 2007.
2. Environmental Science: systems and solutions, McKinney, M.L., Schoch, R.M. & Yonavjak, L. 4th Ed. Jones & Bartlett Publishers, 2007
3. Environmental Science: Toward a Sustainable Future, Wright, R.T. & Nebel, B.J. 10th Ed. Pearson Educational, 2007.
4. Environmental Science: working with the Earth. Miller, G., Thomson Learning, 2002.
5. Comprehensive Risk Assessment for Natural Hazards. World Meteorological Organization 2006.
6. DAMON, P. C. (2006) International Disaster Management. Butterworth- Heinemann.
7. Khan A.N. (2016) Introduction to Hazards and Disasters. Al-Azhar Environmental planning and management, Peshawar
8. Rahman A. 2010. Disaster Risk Management: Flood Perspective. VDM Verlag Publishing Co. Ltd Germany, ISBN 978-3-639-29891-8, 192 Pages.
9. Rahman A. , K h a n A N . , S h a w R. (2015) Disaster Risk Reduction Approaches in Pakistan. Springer Tokyo.
10. Shaw R, Rahman A, Surjan A, Parvin GA. 2016. Urban Disasters and Resilience in Asia. Elsevier, New York.
11. UNISDR. (2009). Global Assessment Report on Disaster Risk Reduction, United Nations International Strategy for Disaster Reduction.
12. W. N. Carter (1999) Disaster Management: Disaster Manager's Handbook, Manila: Asian Development Bank.
13. Wisner, B., P. Blaikie, T. Cannon, and I. Davis. (2004). "At Risk: Natural Hazards, People's Vulnerability and Disasters (2nd Ed.)." Rutledge, London, UK.
14. BIRKMANN, J. (2006) Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies. Tokyo, United Nations University Press.
15. BURTON, I.; Kates, R.W. and White, G.F. (1993) The Environment as Hazard, The Guildford Press, London, UK.
16. COLLINS, A.E. (2009) Disaster and Development, Routledge, London, UK.
17. CROUHY, Michel; Galai, Dan and Mark, Robert (2005) The Essentials of Risk Management. The McGraw Hill Co., New York, US.
18. DAMON, P. C.(2006) International Disaster Management. Butterworth- Heinemann.

19. DAMON, P. C. (2006) Introduction to International Disaster Management. Butterworth-Heinemann, UK.
 20. DILLEY, Max (2005) Natural Disaster Hotspots: A Global Risk Analysis. World Bank and University of Columbia, US.
 21. ELLIOT, J.E. (2006) An Introduction to Sustainable Development. Third Edition. Routledge, London UK.
 22. HEWITT, K. (1997) Regions of Risk: A Geographical Introduction to Disaster. Harlow, Longman, New York, US.
 23. Khan A.N. (2016) Introduction to Hazards and Disasters. Al-Azhar Environmental planning and management, Peshawar
 24. LEWIS, J. (1999) Development in Disaster-Prone Places, IT Press, London, UK.
- Rahman A. 2010. Disaster Risk Management: Flood Perspective. VDM Verlag Publishing Co. Ltd Germany, ISBN 978-3-639-29891-8, 192 Pages.