

**Course Learning Outcomes**

Upon successful completion of the course, the student will be able to:

**Acquire** knowledge about the relationship between disaster risk and urbanization

**Analyze** the urban hazards and risk reduction measures

**COURSE OUTLINE**

1. **Introduction**
  - Concept of Urbanization
  - Causes and impacts of urbanization
2. **Urban Morphology**
  - Urban forms and Pattern
  - City structure
  - Population and City Land use
3. **Hazards in Urban Environment**
  - Urban Floods
  - Environmental Pollution
  - Urban Fire
  - Chemical Hazards,
  - Earthquake and Resilience etc.
4. **Vulnerabilities in urban areas**
  - Population distribution,
  - Urban Slums
  - Housing structure,
  - Building codes and byelaws,
  - Accessibility
  - Emergency services
  - Hydrology and drainage system
5. **Urban Risk Reduction**
  - Urban Risk and Urban Authorities
  - Urban Risk Reduction Strategies
  - Urban Disaster Management Plan

**Practical:**

- Field Study of any city
- Visit to various urban authorities
- Visit to Fire Brigade, Rescue, EPA

**Teaching Methodology**

- Lecturing Written Assignments
- Guest Speaker
- Field Visits
- Report Writing
- Documentaries

**Assessment Criteria:**

**1st Term (25%)** Assignments/Quizzes and Presentations

**Mid Term (35%)** Written (Long Questions, Short Questions, MCQs)  
**Final Term (40%)** Written (Long Questions, Short Questions, MCQs)

**Textbooks:**

1. Singh, A. K. (2021). Fundamentals of Urban Geography. K.K. Publications.
2. Bathrellos, G. D., Skilodimou, H. D., & Chousianitis, K. G. (2023). Natural and Technological Hazards in Urban Areas: Assessment, Planning and Solutions. Switzerland: MDPI AG.
3. Clark-Ginsberg, A., Blake, J. S., & Patel, K. (2020). Disaster Risk Reduction in Cities: Towards a New Normal. United States: RAND.
4. Pascale, F., D'Amico, S. (2023). Geohazards and Disaster Risk Reduction: Multidisciplinary and Integrated Approaches. Springer International Publishing.
5. Bartlett, D., Singh, R. (2020). Natural Hazards: Earthquakes, Volcanoes, and Landslides. United Kingdom: Taylor & Francis Group.
6. Written (Long Questions, Short Questions, MCQs)
7. FERGUSON, Ronald F. and Dickens, William T. (1999) Urban Problems and Community Development. Brookings Institution Press.
8. RAHMAN, A., Khan, A. N., Shaw R. (2016). Disaster Risk Reduction Approaches in Pakistan. SPRINGER Verlag, Tokyo, JAPAN.
9. Shaw, R., Rahman, A., Surjan, A., & Parvin, G. A. (2016). Urban Disasters and Resilience in Asia. Elsevier Inc. New York.
10. KHAN, A. N. (2009) Integrating Disaster Management and Climate Change Adaptation into Policy Making. Proceedings of the International Disaster Management Conference -2009, Baragali – Summer Campus, University of Peshawar, Khyber Pakhtunkhwa, Pakistan
11. PELLING, Mark and Wisner, Ben (2008) Disaster Risk Reduction: Cases from Urban Africa. Earthscan Publications Ltd., London, UK.
12. PUGH, Cedric (1996) Sustainability in the Environment and Urbanisation. Earthscan, London, UK
13. SHAW, Rajib; Srinivas, Hari; and Sharma, Anshu (2009) Urban Risk Reduction: An Asian Perspective. Community, Environment and Disaster Risk, Emerald Group Publishing Limited. KHAN, Amir Nawaz (2016) Introduction to Hazards and Disasters. Al-Azhar Environmental Planning and Management Centre, Peshawar