

MASTER OF SCIENCE (DISASTER MANAGEMENT)

FIRST SEMESTER

CDM/MJ/500: INTRODUCTION TO DISASTER & HAZARDS (Revised)

Credits: 3

Marks: 20+20+60= 100

Duration: 3hrs/week

Objectives: To impart knowledge and concepts of disaster and hazard.

The end semester question paper shall have 6 questions (two questions from each unit) and the students shall be required to attempt four questions selecting at least one question from each unit.

Course outcome: Upon the completion of this paper, the student will be able to define and analysis contributing to disasters and knowledge on disaster management.

Course content:-

UNIT-I

1. Disaster- Definition and concepts
2. Disaster cycle; phases of disaster; PDNA (Post-Disaster Needs Assessment)
3. Classification of disaster
4. Causes and impacts of disasters

UNIT-II

1. Hazard- Definition; types of hazards
2. Natural hazards- Earthquake, Landslide, Cyclone, Flood & Drought
3. Human induced disaster- Classification of man- made disaster; socio- technical disaster; transportation accidents; industrial accidents; structural collapse; oil slicks and spills.

UNIT- III

1. Vulnerability- Definition, types and dimensions
2. Disaster Management Act 2005
3. Disaster Risk Reduction (DRR)
4. Concept of Risk, Capacity and Resilience

Suggested readings:-

1. Coppola, D.P. (2015). Introduction to International Disaster Management. Butterworth-Heinemann, UK.
2. Govt. of India: Disaster Management Act 2005, Government of India, New Delhi.
3. Hyndman, D. & D. Hyndman (2009). Natural Hazards and Disasters, USA, Belmont: Brooks/Cole.
4. Keller E.A. and De Vecchio D.E. (2012): Natural Hazards, Pearson Prentice Hall, USA.
5. NDMA: Handbook on Disaster Management for Nodal Officers (Compilation), National Institute of Disaster Management, New Delhi
6. Taimpo (2016). Disaster Management and Preparedness, CRC Press Publications.
7. Sati, V. P. 2014. Disaster Management and Risk Reduction. Pointer Publishers, Jaipur
8. https://nidm.gov.in/PDF/pubs/handbook_pdna.pdf
9. Understanding disasters: causes and effects, <https://egyankosh.ac.in/bitstream/123456789/26452/4/Unit-2.pdf>
10. Sharif, A. (2020). Disaster types and causes, https://www.researchgate.net/publication/343211640_Disaster_Types_and_Causes

MASTER OF SCIENCE (DISASTER MANAGEMENT)
FIRST SEMESTER
CDM/MJ/501: RISK & CRISIS MANAGEMENT (Revised)

Credits: 3

Marks: 20+20+60= 100

Duration: 3hrs/week

Objectives: To provide the students with an opportunity to understand disaster risk and crisis management and to minimize effects of disaster.

The end semester question paper shall have 6 questions (two questions from each unit) and the students shall be required to attempt four questions selecting at least one question from each unit.

Course outcome: Upon the completion of this paper, the student will be able to analyze risk and crisis management, knowledge on community responsibilities and disaster risk reduction.

Course content:-

UNIT-1: Risk Management

1. Risk concept; element of risk; perception of risk; acceptable risk; Introduction to risk evaluation
2. Risk analysis techniques; process of risk assessment; assessment of risk for different disaster types
3. Activities and roles for the community action risk reduction; participatory risk assessment methods; strategies of risk reduction.

UNIT-2: Crisis Management

1. Incident Response System (IRS)
2. Characteristics and role of NDRF and SDRF
3. Characteristics of NDMA for mitigation works
4. Sendai Framework for Disaster Risk Reduction

UNIT-3

1. Systematic management and strategic planning for vulnerability reduction
2. Hazard resistant designs and construction
3. Training in Crisis Management: Physical and social infrastructures for vulnerability reduction
4. Roles and responsibilities of- community, urban local bodies, States- in Disaster Risk Reduction

Suggested readings:-

1. Coppola, D.P. (2015). Introduction to International Disaster Management. Butterworth-Heinemann, Oxford, UK.
2. Govt. of India: Disaster Management Act 2005, Government of India, New Delhi.
3. Wilson, R. and Crouch A.C. (1987). Risk assessment and comparisons: An Introduction, CRC Press
4. Petak W.J. and Atkisson A.A. (2010). Natural Hazard Risk Assessment and Public Policy: Anticipating and Unexpected, Springer, New York.
5. NDMA: Handbook on Disaster Management for Nodal Officers (Compilation), National Institute of Disaster Management, New Delhi.

MASTER OF SCIENCE (DISASTER MANAGEMENT)
FIRST SEMESTER
CDM/MN/504: DISASTER MANAGEMENT (Revised)

Credits: 2

Marks: 20+20+60= 100

Duration: 2hrs/week

Objectives: To provide students an exposure to understand disaster management. It also aims to gain a preliminary understanding of approaches of DRR, disaster vulnerability profile, and enhance awareness of the institutional processes.

The end semester question paper shall contain 6 questions (3 questions from each unit) and the students shall be required to answer 2 questions from each unit.

Course outcome: Upon the completion of this paper, the student will be able to knowledge and understand on disaster management and institutional framework on disaster management in India.

Course content:-

UNIT-I

1. Disaster Management Cycle- Rescue, Relief, Rehabilitation, Reconstruction, Prevention, Mitigation and Preparedness
2. Disaster and financial resilience
3. Community- based Disaster Risk Reduction (DRR)
4. Compensation and Insurance

UNIT-II

1. Institutional framework of disaster management in India (NDMA-SDMA-DDMA; NDRF & NIDM)
2. Capacity building for disaster/ damage mitigation (structural and non- structural measures)
3. Application of remote sensing & GIS in disaster management
4. Disaster Vulnerability Profile of India & Northeast India

Suggested readings:-

1. Coppola, D.P. (2015). Introduction to International Disaster Management. Butterworth-Heinemann, Oxford, UK.
2. Govt. of India: Disaster Management Act 2005, Government of India, New Delhi.
3. NDMA: Handbook on Disaster Management for Nodal Officers (Compilation), National Institute of Disaster Management, New Delhi.
4. Taimpo (2016). Disaster Management and Preparedness, CRC Press Publications.
5. Sati, V. P. 2014. Disaster Management and Risk Reduction. Pointer Publishers, Jaipur
6. Disaster vulnerability profile of India- https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf
7. Investing in Resilience: Ensuring a Disaster Resistant Future. 2013. ADB Philippines. <https://www.adb.org/sites/default/files/publication/30119/investing-resilience.pdf>
8. https://www.gfdrr.org/sites/default/files/publication/Building_Financial_Resilience_Against_Natural_Disasters_and_Climate_Change.pdf