

MASTER OF SCIENCE (DISASTER MANAGEMENT)
CENTRE FOR DISASTER MANAGEMENT
MIZORAM UNIVERSITY

COURSE STRUCTURE FOR TWO YEARS PG/ MASTER DEGREE PROGRAMME

	Course Code	Course Name	Total Credit	Mark
FIRST SEMESTER	CDM/MJ/500	Introduction to Disaster & Hazards	3	100
	CDM /MJ/501	Risk & Crisis Management	3	100
	CDM/MJ/502	Environmental Geography	3	100
	CDM/MJ/503	Geography of India	3	100
	CDM/MN/504	Disaster Management	2	100
	CDM/MN/505	Environmental Studies	2	100
	CDM/FP/506	<i>Urban based field project</i>	4	100
DMj=9; IMj= 3; DMn=2; IMn=2; FP= 4			20	700
SECOND SEMESTER	CDM/MJ/550	Research Methodology	3	100
	CDM/MJ/551	Geomorphology	3	100
	CDM/MJ/552	Applied Climatology	3	100
	CDM/MJ/553	Hydrology	3	100
	CDM/MN/554	Geophysical & Climatic Hazards	2	100
	CDM/MN/555	Geoinformatics in Disaster and Climate Studies	2	100
	CDM/FP/556	CSST related Field Project	4	100
	DMj=9; IMj= 3; DMn=2; IMn=2; FP= 4			20
<i>Exit option with PG Diploma with the completion of courses equivalent to 40 credits</i>				
THIRD SEMESTER	CDM/MJ/600	Disaster Risk Reduction & Planning	3	100
	CDM/MJ/601	Remote Sensing & GIS	3	100
	CDM/MN/602	Management of Man-made disasters and Security threats	2	100
	CDM/MN/603	Geography of Mizoram	2	100
	CDM/FP/604	Rural based Field Project	4	100
	CDM/DISS/649	<i>Dissertation</i>	6	100
	DMj=6; DMn=2; IMn= 2; FP= 4; DIS= 6			20
FOURTH SEMESTER	CDM/MJ/650	Natural Hazards Management	4	100
	CDM/INTS/651	<i>Internship</i>	4	100
	CDM/DISS/699	<i>Dissertation</i>	12	100
	DMj=3; Ints= 5; DIS= 12			20
GRAND TOTAL	DMj=28; IMj= 6; DMn=6; IMn=6; FP= 12; Ints= 4; DIS= 18		80	2300

DMj= Disciplinary Major IMj= Inter- Disciplinary Major DMn= Disciplinary Minor
 IMn= Inter- Disciplinary Minor FP/Ints/Apts= Field Project/ Internship/ Apprenticeship

MASTER OF SCIENCE (DISASTER MANAGEMENT)

FOURTH SEMESTER

CDM/MJ/650: NATURAL HAZARDS MANAGEMENT

Credits: 4

Marks:20+20+60= 100

Duration: 4Hrs/ Week

Objectives: To provide an understanding and management of natural hazards and lesson learnt from case studies.

The question paper shall have eight questions (two questions from each unit) and the students shall be required to attempt four questions selecting one question from each unit.

Course content:

UNIT – I

1. Earthquake: Causes and Distribution; Magnitude and Intensity of earthquake; Seismic zonation; Earthquake monitoring-approaches to seismic hazard assessment; earthquake monitoring; Earthquake Management in India.
2. Earthquake risk mitigation – Seismic performance examination of RCC Buildings, Retrofitting of vulnerable buildings; Earthquake preparedness; Tsunami Warning System.
3. Case studies on major earthquakes in India.

UNIT – II

4. Landslide: Types and Causes; Landslide hazard zonation; Landslide Management in India; Methods of Landslide studies.
5. Landslide Risk Mitigation – Landslide control measures; Site suitability mapping; Monitoring methods of landslide; Early warning system.
6. Case studies on major landslides in India

UNIT- III

7. Flood: Causes and areas prone to flood; Flood Frequency Analysis; Structural & Non-Structural Measures; Flood forecasting and warning; Case study on major floods in India.
8. Drought: Causes and types; Prediction and monitoring; Drought Management of India; Glacial Lake Outburst Flood (GLOF) and Landslide Lake Outburst Flood (LLOF)- Factors & Risk, Case study in India.
9. Cyclone Management of India; Prevention and Management of Thunderstorm & Lightning, Hailstorm; Urban Flood Disaster Risk Management.

UNIT- IV

10. Hazard, Risk, Vulnerability Analysis of Earthquake, A case study/ Practical
11. Hazard, Risk, Vulnerability Analysis of Landslide, A case study/ Practical
12. Hazard, Risk, Vulnerability Analysis of Flood, A case study/ Practical

13. Do's and Don'ts in earthquake, landslide, flood and cyclone hazards

Suggested readings: -

- 1) Coppola D.P. (2015). Introduction to International Disaster Management, Elsevier.
- 2) NDMA Guidelines—Management of Earthquakes, 2007. A publication of the National Disaster Management Authority, Government of India. April 2007, New Delhi.
- 3) NDMA Guidelines—Management of Floods, 2008. A publication of the National Disaster Management Authority, Government of India. April 2007, New Delhi.
- 4) NDMA Guidelines—Management of Cyclones, 2008. A publication of the National Disaster Management Authority, Government of India, New Delhi.
- 5) NDMA Guidelines—Management of Landslides and Snow Avalanches, 2009. A publication of the National Disaster Management Authority, Government of India. June 2009, New Delhi.
- 6) NDMA Guidelines: Management of Drought. A publication of the National Disaster Management Authority, Government of India. ISBN 978-93-80440-08-8, September 2010, New Delhi.
- 7) NDMA Guidelines: Management of Urban Flooding, 2010. A publication of the National Disaster Management Authority, Government of India. September 2010, New Delhi.
- 8) NDMA, 2018. Guidelines for Preparation of Action Plan- Prevention and Management of Thunderstorm & Lightning/ Squall/ Dust/ Hailstorm and Strong Winds . A publication of the National Disaster Management Authority, Government of India, New Delhi
- 9) NDMA, 2019. National Landslide Risk Management Strategy. A publication of the National Disaster Management Authority, Government of India. September 2019, New Delhi
- 10) Hyndman, D. and D. Hyndman, Natural Hazards and Disasters, 2nd edition. USA, Belmont: Brooks/Cole, 2009.
- 11) Keller E.A. and DeVecchio D.E. (2012): Natural Hazards, Pearson Prentice Hall, USA.

CDM/INTS/650: INTERNSHIP

Objectives: To acquaint the students to understand processes and impact of both the natural and man-made disaster and human negligence in context of environment and to write a field work based report on Disaster Management to minimize the disaster risk/ Risk from disaster.

Course content:

The Project Report based on any two fields based case studies among following disasters and one disaster preparedness plan of respective locality and district:

1. Flood
2. Drought
3. Cyclone and Hailstorms
4. Earthquake and Volcanoes
5. Landslides
6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents

The end-semester examination will consist of two parts:

- | | | |
|-------------------|---|----------|
| A. Project Report | : | 70 Marks |
| B. Viva-voce | : | 30 Marks |

The examination shall be conducted by 2 examiners of which one should be an external examiner.

CDM/DISS/699: DISSERTATION-II

Credits : 12

Marks :100

Duration: 12 Hrs/Week

The students will be assigned dissertation topics under one supervisor within their 3rd Semester period. The dissertation should be submitted before the end of May. The examination will be conducted by two examiners of which one shall be an external examiner.

Scheme of Evaluation of Dissertation:

A. By the Supervisor : 25 Marks (Report only)

B. By External Examiners

1. Report : 50 Marks

2. Viva-voce : 25