

**Public and Mental Health Aspects of Disaster Management, Psychotrauma
Consequent to Disasters (Elective)**

Code	Credit Hours
DM – 833	3 – 0

Course Description:

Aims to give students understanding to identify and deal with the public and mental health issues, and psychotrauma consequent to disasters.

Course Content:

Topics	Learning Outcomes
Disasters: Human-made, Natural	Public Health Challenges, Mental Health Challenges, Psychotrauma
Natural disaster and hazards (geological, hydro-meteorological and biological)	<p>Classification of potentially hazardous natural phenomena with case studies (Seismic events (earthquakes, tsunamis, volcanic eruptions, avalanches, landslides, subsidence), Hydro-meteorological events (typhoon, tornadoes, wildfires, etc.), Hydrologic events (coastal flooding, desertification, salinization, erosion, and sedimentation, etc.), Biological events (infectious diseases, Avian flu and SARS pandemics, bioterrorist attacks, etc.) and Microbial Risk Assessment),</p> <p>Natural Disaster Management (Pre-event Measures: data collection and analysis prediction, vulnerability reduction, emergency preparedness (monitoring, alert, evacuation), education and training, Measures during and immediately after natural disasters: rescue and relief, Post-disaster Measures: rehabilitation, reconstruction),</p> <p>Integration of Natural Hazard Management into the Development Plans (Integrated Development Planning), Rationale of Integrated Development Planning in relation</p>

	<p>to Natural Hazards, Case studies in developed and underdeveloped worlds, Natural Hazard Management in Selected Economic Sectors (Agriculture and food industries, Tourism, Infrastructure development)</p>
<p>Hazardous Chemicals (Anthropogenic Hazards)</p>	<p>Discharge of Chemical into Environment (Sources and types of chemicals discharged, Intentional versus unintentional discharges, Fate and transport of toxic chemicals in environment, Properties of chemicals and distribution in environmental media, Natural processes of transformation and transport of chemicals environment),</p> <p>Effects of Toxic and Hazardous Chemicals (Acute versus chronic effects, Effects on food chain: Bioconcentration, Bioaccumulation, Biomagnification, Risk assessment: Long term versus short term effects)</p> <p>Handling, Treatment, Control and Management of Chemical Spills (Collection, storage and transport, Possible treatment methods and final disposal, Common types of chemical spills, Methods employed for mitigation)</p>
<p>Water, Sanitation and Solid Waste Management</p>	<p>Rapid assessment of initial needs of the water supply and sanitation in disaster scenario (Priority setting and field survey, Water quality testing in emergencies and rapid assessment kits, Treatment and disinfection methods for emergency water supply, Development of key indicators.</p> <p>Humanitarian Charter on Minimum Standards in Water Supply and Sanitation in Disaster Response, Rapid Rehabilitation of Water Supply and Sanitation Systems (Technical development for emergency situation, small scale water treatment and sanitation facility: long-term and short-term interventions, Techniques for good sanitation and hygiene promotion in emergencies.</p>

	Solid Waste Management (Collection and Disposal) in Emergency (Domestic waste, Construction and demolition waste, medical waste, Disposal of dead bodies: Social / cultural practices and needs)
Mental Health Challenges	Protection and promotion of mental health of survivors of disasters, Normal psychological reactions to disasters
Psychotrauma Consequent to Disasters	What is psychotrauma? How common is it? Socio-cultural aspects of Psychotrauma, Epidemiology, Risk and Protective Factors, Disaster Management Mental Health Relief Plan, Assessment (Provision of psychological services to the traumatized individuals, Integration of psychosocial services with the general health care system, Care of the carers, Psychosocial care of survivors, Psychosocial Rehabilitation)
Case Studies and Discussion	
Term Paper	

Textbooks:

No textbook for this course. The course will be based on different reference books, reports, and conference and journal publications.

Reference Material:

1. Natural Hazards. E. A. Bryant. Cambridge Univ. Press, Cambridge, New York, Melbourne, 2005.
2. Hazardous Waste Management, 2nd edition, Michael D. LaGrega, Philip L. Buckingham, Jeffery C. Evans and Environmental Resource Management, McGraw Hill, 2001.
3. Emergency Sanitation: Assessment and Program Design: P. Harvey, S. Baghri and B. Reed, WEDC, UK, 2002.

4. d. Psychotrauma Resource Book: Mowadat H Rana, Sohail Ali, Sajid Rahim, Sami Bilal, Wajid Ali, NUST CTRPI, 2010.

Pre-requisite:

DME-801 (Fundamentals of Disaster Management)

Assessment System

Quizzes	15%
Assignments	10%
Mid-Semester Exam	25%
Term Project/Paper	10%
End Semester Exam	40%