

Asian Institute of Technology
School of Environment, Resources and Development (SERD) and
School of Engineering and Technology (SET)
Disaster Preparedness, Mitigation and Management (DPMM)

IN84.06 Disaster Response and Emergency Management 3(3-0)

Semester: January

Course Objective:

The objective of this course is to provide knowledge and skills for emergency preparedness, planning and response, and to build professional competence for post-disaster risk assessment and communication. The course focuses on meeting immediate basic needs of the affected areas and communities as a short term measure of overall disaster management process.

Learning Outcomes:

On completion of this course, the students will be able to:

- Prepare and execute emergency management plan
- Identify and analyze the post-disaster risks and assess community needs
- Develop emergency management strategies and contribute to crisis management

Prerequisite: None

Course Outline:

I. The Nature of Emergencies and Disasters

1. Overview of Disaster Trends
2. Emergency and Disaster Institutions
3. Evolution of Emergency Management
4. Key Challenges

II. Emergency Management (EM)

1. Disaster Management Cycle and Emergency Management
2. Concepts, Functions and Structures of EM
3. Key Issues
4. Institutional Settings

III. Identifying and Analyzing Risk

1. Framing the Problem and Cause-Effect Linkages
2. Attributes of Emergency Management Policy Problems
3. Typology of Disasters and Emergencies and Response Approach
4. Hierarchy of Goals, Issues and Problems

IV. Handling and Managing Emergencies

1. Needs assessment for immediate response, supplies and logistics
2. Site selection, planning and shelter
3. Health, Food and Nutrition, Water, Sanitation and Environmental and Social Services, and education
4. Field level management

V. Disaster and Emergency Management System (DEMS)

1. Origin and needs of DEMS
2. DEMS Process, Functional and Human Elements

3. External Factors Influencing the DEMS
4. Disaster and Emergency Planning, Monitoring, Audit and Review

VI. Emergency Response and Recovery

1. Incident Management System/Incident Command System (ICS)
2. Multiagency Coordination
3. Information Processing and Communication
4. Resource Management and Logistics

VII. Developing Strategy

1. Risk Management
2. Mitigation Strategy
3. Recovery Strategy
4. Response Strategy
5. Preparedness

VIII. Crisis Management

1. Crisis Life Cycle
2. Commencement of Crisis
3. Purpose, Objectives and Crisis Management Activities
4. Operational Realities

Laboratory Session(s): None

Learning Resources:

Textbooks:

1. Lucian G. Canton (2007), Emergency Management (Concepts and Strategies for Effective Programs), Wiley.
2. Tony Moore (2008), Disaster and Emergency Management System, British Standards Institution.

Reference Books:

1. John Handmer and Stephen Dovers (2007), Handbook of Disaster and Emergency Policies and Institutions, Earthscan.
2. Damon P. Coppola and Erin K. Maloney (2009), Communicating Emergency Preparedness (Strategies for Creating a Disaster Resilient Public), CRC Press.
3. Tony Moore and Raj Lakha (Eds.) (2006), Tolley's Handbook of Disaster and Emergency Management (Principles and Practice), 3rd Edition, Elsevier.
4. Nicolas A. Valcik and Paul E. Tracy (2013), Case Studies in Disaster Response and Emergency Management, CRC Press.
5. DeMont Shondell Miller and Jason David Reveria (2011), Comparative Emergency Management (Examining Global and Regional Responses to Disasters), CRC Press.
6. Donna R. Childs and Stefan Dietrich (2002), Contingency planning and disaster recovery, John Wiley and Sons, Inc.

Journals and Magazines:

1. International Journal of Emergency Management, Inderscience
2. Journal of Emergency Management, Weston Medical
3. Disaster Management and Response, ScienceDirect
4. Disasters: The Journal of Disaster Studies, Policy and Management, Wiley
5. International Journal of Mass Emergencies and Disaster, International Sociological Association

6. Journal of Contingency and Crisis Management, Wiley
7. International Journal of Disaster Risk Reduction, Elsevier
8. Disaster Prevention and Management an International Journal, Emerald

Others:

1. DisasterReady, a nonprofit initiative of the CornerStone on Demand Foundation with support from representatives of NGOs, agencies and the private sector <www.disasterready.org>
2. Convoy of Hope, a faith-based humanitarian-relief organization <www.convoyofhope.org>

Teaching and Learning Methods:

This involves lecturing, journal article and book review, assignments for developing country specific emergency management framework, group projects on assigned topics, and presentations.

Time Distribution and Study Load:

- Lectures: 45 hours
- Self-study: 135 hours
- Assignments, presentations and group activities: 18 hours

Evaluation Scheme:

The components of evaluation include:

Mid-Semester examination: 30%

Individual assignment: 10%

Group Project: 20%

Final examination: 40%

Both Mid-semester and Final examinations will be closed book.

Grade “A” will be awarded if a student can demonstrate thorough knowledge and mastery of concepts and techniques and understanding of subject matter with high degree of skill to relate them with real world situations, Grade “B” will be awarded if a student can demonstrate good knowledge and understanding of subject matter with good skill of relating them with real cases. Grade “C” will be given if a student can demonstrate some knowledge of the concepts and understanding but lacks skill of relating them with real world cases. Grade “D” will be given if a student has poor understanding of concepts and techniques with no or little skill to relate with real world cases. Grade “F” will be given if student demonstrates very poor and limited knowledge and understanding of concepts and lacks the skill to relate with real world cases.

Instructor(s): Professor Jayant K. Routray