

Elective Course EC-202(4) Disaster Management

Course Introduction:

This course aims to provide an insight into immensely significant area of common welfare. The course will enable a student to understand the major types of natural and man-made disasters and also methods of mitigating their ill-effects on the human race. The course also covers a few modern disasters which are hitherto not experienced by humankind across the globe.

Course Objective:

The student would be able

- 1) To understand the concept of managing the Disasters when it occurs.
- 2) To apply their technical knowledge to manage the Disasters.
- 3) To identify the key points and area where and how to use the Information Technology to manage the damage in disasters.
- 4) To get detailed knowledge of various Government agencies and NGOs dealing for disaster management.

No. of Credits: 2

Theory Sessions per week: 2

Teaching Hours: 20 hours

UNIT	TOPICS / SUBTOPICS
	Introduction to Disasters / Hazards
1	<ul style="list-style-type: none">• Definition of disaster:• General Effects of disasters• Causal Factors• Disasters and development (cause and effect)• Meaning of Disaster Management• Types of Disaster/Hazards:• Natural• Anthropogenic• Sociological• Technological• Transport• Climate change• Social and Psychological dimensions of disasters• Coping with stress, anxiety and fears• Technology and disaster management• Latest Technological equipment• Disaster Response:• Reasons for concern• Objectives• Study of responses in Kutch Earth-quake, 2001

2	Disaster Management <ul style="list-style-type: none"> • Definition • Need • Obstacles • Disaster Relief and Factors • International approach to integrated disaster risk management • Risk Mitigation Strategies • Participatory assessment of disaster risk • Disaster Reduction • Communicable diseases occurring after natural disasters • Their prevention • Mass casualty management • Technology and disaster management and latest technological equipment to combat disasters
3	Relief, Rehabilitation, Recovery and Role of NGO and Government <ul style="list-style-type: none"> • Relief • Rehabilitation • Displacement and Development • Priorities and opportunities in Rehabilitation and reconstruction • Relevance of Mitigation and its techniques • Mitigation measures • People's Participation • Disaster Recovery <ul style="list-style-type: none"> ○ Business continuity planning • Role of NGO in Managing disasters • India's natural disaster's proneness: <ul style="list-style-type: none"> ○ Management of disasters in India ○ Institutional and policy framework ○ Government Policies for Disaster Planning
4	Use of IT in Disaster Management, Applications and Future of Disaster Management <ul style="list-style-type: none"> • Use of IT in Disaster Management: <ul style="list-style-type: none"> ○ Computer Attack ○ Other latest technological Equipments: <ul style="list-style-type: none"> ▪ TSUNAMI WARNING SYSTEM ▪ CENS (Community Emergency Notification System) ▪ CREST (Consolidated Reporting of Earthquakes and Tsunamis) ▪ CUBE (Caltech USGS Broadcast of Earthquakes) ▪ DART (Deep Ocean Assessment and Reporting of Tsunamis) ▪ EAS (Emergency Alert System) ▪ EMWIN (Emergency Managers Weather information Network) ▪ GPS (Global Positioning System)

	<ul style="list-style-type: none"> ▪ ITIC (International Tsunami Information Center) ▪ NOAA (National Oceanic and Atmospheric Administration) ▪ NWS (National Weather Service) ▪ PTWS (Pacific Tsunami Warning Center) ▪ RACE (Rapid Alert Cascadia Earthquake) ▪ REDI (Rapid Earthquake Data Integration) ▪ SAWS (Simultaneous Announcement Wireless System) ▪ THRUST (Tsunami hazard Reduction Using System Tech.) ▪ WC/ATWC (West Coast/Alaska Tsunami Warning Center) ▪ Audio Evacuation System ○ Laser Scanning ○ Remote Sensing-GIS Integration ○ Atmospheric Water Generator ○ The AIRCRAFT GATEWAY PROCESSOR (AGP) ○ Mobile Electronic Warfare Platform • Applications in Disaster Management: <ul style="list-style-type: none"> ○ Bio-terrorism <ul style="list-style-type: none"> ▪ Framing the Problem ▪ Threat assessment ○ Statistical Seismology and its application
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Textbook: Disaster Management

Publisher: Himalaya Publishing House

By M. Saravana Kumar

Reference Books:

1.Introduction to Disaster Management

Publisher: Macmillan

By Satish Modh

2.The Disaster Recovery Handbook

Publisher: PHI

By Michael Wallace and Lawrence Webber

3.Citizen's Guide to Disaster Management

Publisher: Macmillan

By Satish Modh