



IPS Academy, Institute of Engineering & Science
(A UGC Autonomous Institute, Affiliated to RGPV, Bhopal)
Fire Technology & Safety Engineering Department

Honor's in Disaster Management
(To be offered to the students of Fire Technology & Safety
Engineering Department)

S. No.	Semester	Subject Name	Contact Hours per week			Total Credits
			L	T	P	
1.	V	Principles of Disaster Management	4	0	0	4
2.	VI	Disaster Management Legislations	4	0	0	4
3.	VII	Emergency Response and Management of Disasters	4	0	0	4
4.	VIII	Risk Assessment and Vulnerability Analysis	3	0	0	3
		Total	15	0	0	15
		Total Academic Engagement and Credits	15			15



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	Principles of Disaster Management	4L:0T:0P (04 hrs)	04 Credits
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Course Objective:

To understand and learn the basic essentials act and standards in disaster management preparedness and national capacity building.

Module 1 (08 Hrs)

INTRODUCTION TO DISASTER AND DISASTER MANAGEMENT: Disaster definition, types, their variation, causal factors, disaster management concept, Disaster Management cycle and developmental considerations.

Module 2 (08 Hrs)

DISASTER PREVENTION AND MITIGATION: Primary and secondary prevention, objectives, means of emerging management actions, mitigation, objectives and various mitigation measures.

Module 3 (08 Hrs)

PLANNING FOR DISASTER PREPAREDNESS: For Community; for people with special needs, with respect to infrastructure, housing and live stock; with respect to contingency health care services, control of outbreak of communicable diseases.

Module 4 (08 Hrs)

ROLES AND RESPONSIBILITIES IN DISASTER PREPAREDNESS : Central, State, District and Local Administration; Armed Forces, Paramilitary Forces, National Service and Scouts; Non Governmental Organisations, community based organizations; International Agencies; Community; family and individuals; Media..

Module 5 (08 Hrs)

DISASTER MITIGATION: Principles, approaches, techniques; education and training; community participation, disaster mitigation strategies Role of Technology in Disaster preparedness, Information technology; Geographical information system; communication technology; emerging technologies.

Course Outcomes:

At the end of this course student will be able to:

1. Know about the different types of disasters and their cycles.
2. Understand the fundamentals of disaster prevention and mitigation.
3. Plan various types of disaster preparedness strategies with different resources.
4. Develop roles and responsibilities of various agencies involve in disaster management
5. Understand principles, approaches and techniques involved in disaster mitigation process.

List of Text/Reference Books:

1. Disaster Management : Text and Case Studies - DBN Murthy, Deep and Deep Publication, New Delhi.
2. National Policy on Disaster Management-2009
3. Hyogo Framework for Action 2005-15
4. International Humanitarian Law Hans Peter Gasser-1993
5. International Humanitarian Law, Larry May Bee, Benarjii Chakka



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	Disaster Management Legislations	4L:0T:0P (04 hrs)	04 Credits
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Course Objective:

To understand and learn the basic essentials act and standards in disaster management preparedness and capacity building.

Module 1 (08 Hrs)

DISASTER MANAGEMENT LAWS & REGULATION: Disaster Management Act 2005, Environmental protection act 1986, Hyogo Framework for Action 2005-2015, Biosafety Categena protocol, Kyoto protocol, Montreal protocol, Yokohoma strategies, U.N.O's International decade for Natural Disaster Reduction.

Module 2 (08 Hrs)

BUSINESS LAWS: Indian Contract Act 1872, The company's act 1956, Law of Intellectual Property, I (D & R) Act : Regulation of scheduled industries, powers of IDRA, industrial licensing.

Module 3 (08 Hrs)

DISASTER POLICIES AND FRAMEWORK: Disaster Management Policy: Concept, principles, constitutional elements, Disaster Management Policies of Different States (eg. MP, Gujrat, Orissa, Uttranchal, Delhi etc.), Countries (Japan, South Asian Countries, USA etc.)

Module 4 (08 Hrs)

MEANING, NEED AND PROCESS OF STRATEGIC MANAGEMENT: Business Policy, Corporate Planning and Strategic Management: Single and Multiple SBU organisations: Strategic Decision Making Processes Rational Analytical Intuitive-Emotional. Political Bhavioural, Universality of strategic Management, Strategists at corporate level and at SBU level; Interpersonal informational and decision roles of a manager.

Module 5 (08 Hrs)

STRATEGY IMPLEMENTATION: Implementation process; resource allocation; organizational implementation plan and policy implementation; Leadership Implementation; Implementing strategy in International setting.

Course Outcomes:

At the end of this course student will be able to:

1. Know about the disaster management laws in the country with applicable regulations.
2. Familiar with business laws and their application.
3. Understand the disaster policies framework in our country.
4. Develop strategies management against familiar disaster.
5. Implement different strategies in disaster management.

List of Text/Reference Books:

1. Lawrence R Jauch and William F. Glueck, "Business Policy and Strategic Management" McGraw Hill Book Co. New York.
2. Glen Boseman and Arvind Phatak, "Strategic Management : Text and Cases" John Wiley and Sons, Singapore.
3. Daniel J. Mearthy, Robert J. Minichicillo, and Joseph R. Curran "Business Policy and Strategy" Richard D. Irwin, AITBS, New Delhi.
4. Disaster Management Act-2005
5. National Policy on Disaster Management-2009
6. Hyogo Framework for Action 2005-15
7. International Humanitarian Law Hans Peter Gasser-1993
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	Emergency Response and Management of Disasters	4L:0T:0P (04 hrs)	04Credits
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Course Objectives:

To understand the fundamentals approaches of disaster risk reduction & relationship between vulnerability, disaster, disaster prevention and risk reduction.

Course Content:

Module 1

(08 Hrs)

NATURAL HAZARDS : potentially hazardous natural phenomena – earthquakes – landslides – flooding – cyclones – hazards in arid and semi-arid areas – nature of the hazard – hazard management activities – disaster mitigation – natural hazard prediction – emergency preparedness – disaster, rescue and relief – post disaster rehabilitation and reconstruction – education and training activities – vulnerable elements to be considered in the development planning for natural hazard management – applications of remote sensing and GIS in disaster management.

Module 2

(08Hrs)

EMERGENCY PLANNING: on-site and off-site emergency plan – need of plan – possible approach – objectives of emergency plan. On-site emergency planning – formulation of the plan and emergency services – Identification of resources – actions and duties – emergency procedure – mock drills. Off-site emergency planning – objectives and elements of off-site plan – role of administrative machinery – role of major hazard works management – role of the local authority. Emergency preparedness at local level – Awareness and preparedness for emergencies at local level (APELL) – The process and its partners.

Module 3

(08 Hrs)

INDIAN LEGISLATIONS: Requirements of emergency plan as per Indian legislations like Factories Act, Manufacture, Storage and Import of Hazardous Chemicals Rules, Chemical Accidents (Emergency planning, Preparedness and Response) Rules. Emergency planning and preparedness in international standards like ISO 14001, OHSAS 18001 and OSHA's Process Safety Management System, Emergency Planning in Seve so II directive – elements of emergency planning in IS : 18001 – Hazardous Materials / Spills Emergencies – contingency plans for road transportation of hazardous chemicals – contingency plans for oil spills in marine environment.

Module 4

(08 Hrs)

DISASTER MANAGEMENT IN CHEMICAL INDUSTRY: Types of emergencies – major industrial disasters – causes and consequences of major industrial disasters like Flixborough, Seveso and Bhopal. Components of a major hazard control system – identification of major hazard control installations – purpose and procedures – safe operation of major hazard installations – mitigation of consequences – reporting to authorities. Implementation of major hazard control systems – group of experts – training – checklists – inspection – evaluation of major hazards – information to the public – manpower requirements – sources of Information.

Module 5

(06 Hrs)

DISASTER MANAGEMENT ACT AND INSURANCE: Role of Insurance in Disaster Management, Role of International co-operation (i.e. NGO & UN Agencies), Effect on environment due to disaster. Need for National Capacity Building and Disaster Knowledge Network The Disaster Management Act:: Need for technological input in disaster mitigation, community based disaster preparedness program; Preparation of Disaster Management; Plan Early Warning System; Role of Information Technology (IT).

Course Outcome:

At the end of this course student will be able to:

1. Evaluate the principles and practices of disaster risk reduction and management.
2. Know the basic role of public, national/international organizations in disaster management.
3. Prevention, mitigation preparedness, response and recovery process in disaster management.
4. Understand distinguish between the different approaches needed to manage pre-during and post disaster periods.
5. Apply the knowledge in conducting independent DM study including data search and analysis from disaster case study.

List of Text/Reference Books:

1. Disaster Management Act 2005
2. Industrial Security Management S.C. Dey
3. Dangerous Properties of Industrial Material □ Irvin Sex.
4. Encyclopedia of occupational Health & Safety (OSHA) IV edition.
5. Safe Handling of Hazardous Chemicals by Rohatgi.
6. Industrial Fire Hazards Hand Book (NFPA)
7. Major Hazard Control I.L.O. Geneva.
8. What went wrong-Trevor Kletz.
9. Chemical process safety □ Daniel . A. Crawl, Joseph F Louver.
10. Madhya Pradesh Control of Industrial Major Accident Hazards rules 1999.



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	Risk Assessment and Vulnerability Analysis	3l:0T:0P (03 Hrs)	03 Credits
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Course Objective:

The objectives of this course are to explain to the student operations of upcoming insurance and banking sector, statutory requirements and understanding of financial environment and market in which they operate.

Course Content:

Module 1

(08 hrs)

INSURANCE AND RISK MANAGEMENT: Introduction to risk, Nature & types of risks, Risk Management Process, Risk and its relation with Insurance, General principles of Insurance, Insurance Terminology, Insurance Application and Acceptance Procedure.

Module 2

(08 hrs)

LIFE INSURANCE: Principles, Products Term Insurance, Endowment Insurance, Pensions, Annuities. Claim Management, Premium payment lapse and Revival, Premium Calculations, Concept of Mortality tables, Assignment, Nomination, Loans, Surrenders, Foreclosure, Reinsurance, Bank assurance, Underwriting Actuarial Profession.

Module 3

(09 hrs)

GENERAL INSURANCE: Principles, Products Fire, Marine, Motor Vehicles, Public Liability, Commercial, Medi-claim and Health Policies, Group Insurance, Crop Insurance etc.

Module 4

(08 hrs)

LIFE INSURANCE POLICIES: Applications in different situations; Important life insurance policies; Life insurance annuities; Important legal provisions and judicial pronouncements 20% in India.

Module 5

(06 hrs)

INSURANCE REGULATORY AND DEVELOPMENT AUTHORITY (IRDA): Functions & importance of IRDA, Legislation on Advisors, Brokers, Corporate Agents, Agents, TPA, Recent developments.

Course Outcome:

At the end of this course student will be able to:

1. Understand the principles of Insurance and their applications.
2. Describe fundamental theories on life insurance.
3. Demonstrate the basic concepts of general insurance.
4. Understand the life insurance policies and judicial pronouncements in India.
5. Describe function and importance of IRDA

List of Text/Reference Books:

1. M. N. Mishra; Insurance Principles & Practice; S. Chand & Co. New Delhi
2. R. M. Shrivastava; Management Of Indian Financial Institutions; Himalaya Publications, New Delhi
3. Arondekar; Principles Of Banking; Iibf; Macmillan India Ltd.
4. Ajay Kumar; Risk Management; Iibf; Macmillan India Ltd.
5. Timothy Koch And S. Mac Donald "Bank Management" New York, Dryden Press
6. Mishra M. N. Life Insurance Corporation Of India- I, II & III Vol. Raj Book & Subscription, Jaipur