Dr. Bhimrao Ambedkar University, Agra

(Formerly: Agra University)

Pt. Deen Dayal Upadhyay Institute of Rural Development
Paliwal Park Campus, Agra (U.P.)

Dated : 28-04-2022

Minutes of Academic Committee

Held on 28.04.2022 at HOD Chamber

Experts/Member at present in the meeting as follows:-

1.	Dr. Manoj Kumar Singh DDUIRD, Agra	Convenor
2.	Prof. Dinesh Kumar CCS University, Meerut	External Expert
3.	Prof. Seema Bhadauria Principal, BVRI, Bichpuri	External Expert
4.	Dr. Basant Bahadur Singh Deptt. of Education, RBS College, Agra	External Expert
5.	Dr. Arun Raghav RBS College, Agra	External Expert
6.	Dr. D.S. Yadav FMCA, RBS College, Agra	External Expert
7.	Dr. Abha Singh DDUIRD, Agra	Internal Expert
8.	Dr. Aayush Mangal DDUIRD, Agra	Internal Expert

In the meeting following decisions were passed and approved as follows:-

1. The Academic Committee revised the ordinance and syllabus of M.A. (Rural Development & Management) as per norms of NEP-2020. (Annxure -1)
2. The Academic Committee revised the ordinance and syllabus of M.A. (Disaster Management) as per norms of NEP-2020. (Annxure -2)
3. The Academic Committee revised the ordinance and syllabus of M.A. (Public Administration) as per norms of NEP-2020. (Annxure -3)
4. The Academic Committee revised the ordinance and syllabus of Master of Human Resource Management (MHRM) as per norms of NEP-2020. (Annxure -4)

Signature Not Verified
RAJEEV KUMAR
Digitally Signed By : Registrar

5. The Academic Committee revised the ordinance and syllabus of P.G. Diploma in Disaster Management as per norms of NEP-2020. (Annxure -5)
6. The Academic Committee revised the ordinance and syllabus of P.G. Diploma in Corporate Social Responsibility as per norms of NEP-2020. (Annxure -6)
7. The Academic Committee also recommended to start the new PG course M.A. (Education) and the Committee considered and approved with changes the ordinance and syllabus of M.A. (Education) as per norms of NEP-2020. (Annxure -7)
8. The Academic Committee considered the importance of initiating graduation courses as per NEP-2020 and CBCS, in three subjects as follows :

   (a) B.A. in Public Administration

   (b) B.A. in Education

   (c) B.A. in Geography

   The courses are prescribed by the UP State Govt. for B.A. in Education & Geography and UGC prescribed syllabus under LOCF for Public Administration, with minor permissable modifications. The Academic Committee approved both courses, ordinance and curriculum.
9. The Academic Committee also approved the fee structure as follows:-

a. M.A. (Rural Development & Management)	-	Rs. 7,500 per semester	(45 Seats)
b. M.A. (Disaster Management)	-	Rs. 7,500 per semester	(45 Seats)
c. M.A. (Public Administration)	-	Rs. 7,500 per semester	(45 Seats)
d. Master of Human Resource Management	-	Rs. 17,500 per semester	(60 Seats)
e. Post Graduate Diploma in Disaster Management	-	Rs. 7,500 per semester	(30 Seats)
f. Post Graduate Diploma in Cooprate Social Responsbility	-	Rs. 7,500 per semester	(30 Seats)
g. M.A. (Education)	-	Rs. 7,500 per semester	(45 Seats)
h. B.A. (Public Administration, Education, Geography)	-	Rs. 7,500 per semester	(60 Seats)

10. The Academic Committee also gives authority to the Head of the Institute to make suitable changes as and when required in the ordinances and syllabus of the courses.

The Academic Committee meeting concluded with a vote of thanks to the chair.

(Dr. Manoj Kumar Singh) (Prof. Dinesh Kumar) (Prof. Seema Bhadauria)

(Dr. Basant Bahadur Singh) (Dr. Arun Raghav) (Dr. D.S. Yadav)

(Dr. Abha Singh) (Dr. Aayush Managal)

Pt. Deen Dayal Upadhyay Institute of Rural Development

Dr. Bhimrao Ambedkar University, Agra

ORDINANCE

AND

COURSE STRUCTURE

P.G. Diploma in Disaster Management (PGDDM)

(Course Curriculum Under CBCS and NEP-2020)

Pt. Deen Dayal Upadhyay Institute of Rural Development
Dr. Bhimrao Ambedkar University, Agra

P.G. Diploma in Disaster Management (PGDDM)

ORDINANCE AND COURSE STRUCTURE

(1) Title of the Course : P.G. Diploma in Disaster Management (PGDDM).

(2) Objective :

(1) To minimize the risk of disasters with the effective use of Remote sensing and GIS.

(2) To train students on various aspects of Disaster Management.

(3) To create safe and sustainable environment by community strengthening capacity building.

(4) To assist local administration by providing expertise in the field of Disaster Management.

(3) Mode : Self Finance Scheme (SFS)

(4) Duration : Duration of the course shall be of 2 Semesters (i.e., 1 years).

(5) Seats : The total No. of 30 students will be admitted in the course in each academic session.

(6) Eligibility : Any Graduate with three years degree course in any discipline shall be eligible for admission in this course.

(7) Tuition Fee : Rs. 7,500 per semester, i.e., Rs. 15,000 per year.

(8) Admission Procedure :

There will be an entrance test organized by the University and a merit list will be prepared on the basis of marks obtained in the entrance examination. Admission shall be taken directly by merit if number of applications submitted for entrance test found less than the seats. The rule of reservation will be followed as per university rules.

(9) Faculty : The faculty includes the core faculty, senior or retired teachers of the deptt. of Geography, Political Science, Sociology, Statistics & Law of Dr. Bhimrao Ambedkar University, Agra and other Universities.

(10) Attendance : Seventy five percent attendance in the class is compulsory for all the students.

(11) Examination and Viva-Voce :

The semester examination will be conducted by the university during the period in which the examinations of other courses will be arranged. The viva-voce will be conducted at the end of the 2nd semester by a board of examiners including external and internal examiners as per university rules.

All the rules and regulations regarding examination, merit and divisions shall be administered as per university directions. It is mandatory for each and every student to finish project work as prescribed by the Institute. Student shall be declared failed if he/she does not complete the prescribed project work.

(12) Teaching Methodology :

This is a regular course and the teaching shall be done through class lectures, seminars, group-discussions & demonstration. There shall be two mid learn class or home assignments for each paper for 40 marks. Each assignment shall be of 20 Marks. The marks obtained by students in each assignment shall be included in their marks of semester examination. The comment and remarks on the assignment shall be communicated to students. There is no provision for the revaluation of the assignments.

PGDDM

P.G. Diploma in Disaster Management (PGDDM)

(Course Curriculum Under CBCS and NEP-2020)

Semester I

Core Courses (Compulsory)

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
1.	DM–101	Introduction to Disaster Management	4	3 : 1 : 0	25	75	100
2.	DM–102	Research Methodology in Disaster Management	4	3 : 1 : 0	25	75	100
3.	DM–103	Risk Assessment and Vulnerability Analysis	4	3 : 1 : 0	25	75	100

Elective (Any One)

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
4.	DM–104A	Physical Geography	4	3 : 1 : 0	25	75	100
5.	DM–104B	Geoinformatics in Disaster Management	4	3 : 1 : 0	25	75	100

Minor from Other Faculty (Any One)

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
6.	HR-301	Human Resource Development	4	3 : 1 : 0	25	75	100
7.	CSR–101	Fundamentals of CSR	4	3 : 1 : 0	25	75	100
8.	RD–101	Rural Development—Concept and Strategies	4	3 : 1 : 0	25	75	100
9.	PA–102	Introduction to Public Policy and Governance	4	3 : 1 : 0	25	75	100
10.	ED-102	Psychology of Learning	4	3 : 1 : 0	25	75	100

Practical

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
11.	DM–105	Field Visit Report Preparation/Presentation	2	0 : 0 : 2	50	—	50

Semester II

Core Courses (Compulsory)

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
1.	DM–201	Pandemic Preparedness & Response	4	3 : 1 : 0	25	75	100
2.	DM–202	Finance Resilience and Risk Transformation	4	3 : 1 : 0	25	75	100
3.	DM–203	Rehabilitation, Reconstruction and Recovery	4	3 : 1 : 0	25	75	100

Elective (Any One)

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
4.	DM–204A	Health Emergencies and Disaster Management	4	3 : 1 : 0	25	75	100
5.	DM–204B	Occupational Health and Fire Safety Management	4	3 : 1 : 0	25	75	100

Practical

S.No.	Course No.	Course Title	Credits	L : T : P	Internal	External	Total
5.	DM–205	Field Visit Report Preparation/Presentation	2	0 : 0 : 2	50	—	50
6.	CSR–205	Comprehensive Viva-Voce	4	0 : 0 : 4	—	100	100

Credit Summary

S.No.	Semester	Core Course	Minor Course	Elective	Practical	Total Credits	Total Marks
1.	Sem. I	12	4	4	2	22	550
2.	Sem. II	12	—	4	6	22	550
	Total					44	1100

Note : Students will have to earn 44 credits to pass PGDDM course.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER FIRST

PAPER – 101
INTRODUCTION TO DISASTER MANAGEMENT

Objectives

- To orient students about various natural and manmade disasters
- To teach the concept of Disaster management and measures to be taken at different stages of disaster management
- To provide insight about global, national and regional level scenario of disaster management

Module 1 –Introduction

Unit 1: Hazard, Risk, Vulnerability, Disaster;

Unit 2: Disaster Management, Meaning, Nature Importance, Dimensions & Scope of Disaster Management, Disaster Management Cycle.

Unit 3 : National disaster management framework; financial arrangements for Disaster management, International Strategy for Disaster reduction.

Module 2 – Natural Disasters

Unit 1: Natural Disasters- Meaning and nature of natural disasters, their types and effects

Unit 2: Hydrological Disasters - Flood, Flash flood., Drought, cloud burst

Unit 3: Geological Disasters- Earthquakes, Landslides, Avalanches, Volcanic eruptions, Mudflow

Unit 4:Wind related- Cyclone, Storm, Storm surge, tidal waves

Unit 5: Heat and cold Waves, Climatic Change, Global warming, Sea Level rise, Ozone Depletion

Module 3 – Man made Disaster

Unit 1: CBRN – Chemical disasters, biological disasters, radiological disasters, nuclear disasters

Unit 2: Fire – building fire, coal fire, forest fire, Oil fire

Unit 3 Accidents- road accidents, rail accidents, air accidents, sea accidents

Unit4: Pollution and deforestation- air pollution, water pollution, deforestation, Industrial wastewater pollution, deforestation

Module 4 Disaster Determinants

Unit 1 Factors affecting damage – types, scale population, social status, habitation pattern, physiology and climate.

Unit 2: Factors affecting mitigation measures, prediction, preparation, communication, area and accessibility, population, physiology and climate,

Course Outcome:

Students will learn different disasters and measures to reduce the risk due to these disasters. Also, students will learn institutional frame work for disaster management at national as well as global level

Suggested readings:

- Disaster Administration and Management, Text & Case studies- SL Goel- Deep and Deep Publications
- Disaster Management- G.K Ghosh-A.P.H. Publishing Corporation
- Disaster management – S.K.Singh, S.C. Kundu, Shobha Singh A – 119, William Publications, New Delhi.
- Disaster Management – Vinod K Sharma- IIPA, New Delhi,1995
- Encyclopedia of Disaster Management- Goel S.L. - Deep and Deep
- Publications, New Delhi, 2006.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER FIRST

PAPER – 102
RESEARCH METHODOLOGY IN DISASTER MANAGEMENT

Objectives:

To instill a comprehensive and step-wise understanding of the research process with a balanced blend of theory and applicative techniques; and also facilitate them to develop insights about basic concepts of research designs and methodology aimed at solving research problems

Module 1

Classification and Tabulation of data, Diagrammatic and Graphical Representation of Data, Measures of Central Tendency, Measures of Dispersion.

Module 2

Coefficient of Correlation (Karl Pearson's and Rank Correlation) upto 3 variables, Regression analysis upto two variables, cost of living index number, Fisher's Ideal Index number.

Module 3

Analysis of time series, meaning and importance of time series, measures of long term trends, measures of seasonal, cyclical and random fluctuations.

Module 4

Basic stages of scientific enquiry, formulation of a problem, developing analytical framework, inductive and deductive reasoning's, tools of research in disaster management.

Module 5

Collections of primary statistics for research purpose, concept of stampling, random v/s census methods, types of sampling statistical properties of random, purpose, stratifies, proportional sampling, project monitoring and mid course correction, project funding.

Course Outcome:

Course can be an asset to the disaster management team by providing well-equipped and scientifically skilled research professionals and managers for conducting research in every aspect of disaster management.

Suggested readings:

- Methods of Social Survey and Research- Bajpai S. R. (1975) - Kitabghar, Kanpur
- Theory and Practice in Social Research - Hans Raj (1988) - Surjeet Publication, Kolhapur
- Methodology of Research in Social Science - Krishnaswami O. R. (1988) - Himalaya Pub. House
- Quantitative Technique - Kothari, C. R. (2005) - Vikas Publication House, New Delhi
- Development of Research tools - Gautam, N. C. (2004) - Shree Publishers- New Delhi
- Research Methodology and Statistical Techniques - Gupta Santosh (2005) - Deep and Deep Publications

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER FIRST

PAPER – 103
RISK ASSESSMENT & VULNERABILITY ANALYSIS

Objectives:

- To train students in doing Risk assessment and Vulnerability analysis
- To teach students vulnerability reduction strategies

Module 1 Introduction

Hazard, Risk and Vulnerability, Risk Concepts, Elements Of Risk, Perception of Risk, Acceptable risk, Requirements in Risk assessment

Module 2 Risk Assessment & Reduction

Unit 1 : Risk Reduction-

Mainstreaming "Risk" , Role of science and technology in Disaster Risk Reduction, Strategies of Risk reduction, International Mobilization of Risk reduction

Unit 2 : Risk analysis techniques- Process of Risk assessment, Analytical systems for risk assessment, Natural hazard/ risk assessment, Understanding climate risk, Mapping of risk assessment, Decision making for risk reduction, Problems in risk assessment

Unit 3 : Participatory risk assessment:

Rationale for people's participation, Role of civil society organizations, Impact of Globalization, Activities and roles for the community action Risk reduction, Participatory risk assessment methods

Unit 4 : Vulnerability analysis and Risk assessment:

Addressing Semantics, Approaches to vulnerability Analysis, Models of Vulnerability analysis,

Quantification of vulnerability, Assessment of Risk Vulnerability and capacity analysis (VCA),

Vulnerability of Himalayan Eco- system

Unit 5 : Hazard mapping using GIS, Use of remote sensing and GIS for risk assessment , muti hazard risk analysis using GIS

Module 3 Vulnerability

Unit 1 : Observation and perception of vulnerability- Vulnerability Identification,

Vulnerability types and dimensions, Vulnerability- Social factors and economic factors

Unit 2 : Vulnerability to shanty settlements- Vulnerability in the city, Risk in Urban areas, Issues in urban planning, Initiatives for risk reduction in India

Module 4 Strategic development for Vulnerability reduction:

Physical & Social infrastructure for Vulnerability reduction, Interactive areas for Vulnerability reduction & Policy making, Hazard resistant designs and construction, System management Strategic planning for vulnerability reduction

Course outcome:

It will help in identifying vulnerable regions and calculating risk associated with the disaster. Minimizing loss due to disasters

Suggested Readings:

- Disaster Administration and Management, Text & Case studies- SL Goel- Deep and Deep Publications
- Disaster Management- G.K Ghosh-A.P.H. Publishing Corporation
- Disaster management – S.K.Singh, S.C. Kundu, Shobha Singh A – 119, William Publications, New Delhi.
- Disaster Management – Vinod K Sharma- NIDM, New Delhi
- Disaster Risk Reduction in South Asia- by Pradeep Sahni - Prentice – Hall of India
- Disaster Mitigation and Management Post – Tsunami Perspectives P, Jagadish Gandhi
- Disaster Mitigation – Experiences and reflections – By Pradeep sahni - Prentice – Hall of India

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER FIRST

PAPER – 104A
PHYSICAL GEOGRAPHY

Unit -I: Weathering and Landforms

Scope and objectives - Geodynamic energy and landform evolution: Type of Weathering - physical, chemical and biological; internal heat energy and gravitational energy in the formation of landforms; Basic geomorphic concepts of landform evolution; Exogenic processes weathering and geological controls in weathering- chemical weathering processes and products; weathering, erosion and landform alteration.

Unit -II: Fluvial and Glacial Systems

Fluvial system and processes - drainage basin, basin and stream characteristics, drainage types and patterns, Drainage morphometric, erosion, arid topography, transportation and deposition by running water, erosional landforms, depositional landforms; Glacial processes, types of glaciers and glacial landforms, permafrost.

Unit -III: Endogenic Landforms

Endogenic landforms: internal heat source, concept of plate tectonics and its role in the evolution of landforms, earthquakes and related landscape alterations, volcanic landforms, mountain building, rift valley formations; oceanic landforms.

Unit -IV: Oceanic weather pattern

Origin of ocean basins: Continental shelf, slope, rise and abyssal plains: bottom relief of Indian, Atlantic and Pacific Oceans; coral reefs; temperature and salinity of the Oceans; Density of Sea water; Waves, Tides and ocean currents: thermohaline circulation and the oceanic conveyor belt: sea-level changes; Ocean hazards: Sea-level changes - Pollution on marine environment including fisheries climate change on marine bio-diversity Coastal Zone Management.

Unit -V: Climate Resilience

Climatology: Origin, composition and structure of the atmosphere; insolation; Distribution of temperature, atmospheric pressure and motion general atmospheric circulation. Classification of world climates; Koppen's and Thornthwaite's Schemes; Heat Budget; Hydrological Cycle: Climate resilience: meaning and concept indicator of climate resilience - causes and theories of climate resilience.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER FIRST

PAPER – 104B
GEOINFORMATICS IN DISASTER MANAGEMENT

Unit -I: Basics of Remote Sensing

Remote Sensing: History, Development, Definition, Concept & Principles, Electromagnetic Radiation (EMR) and its Characteristics, Wavelength Regions and their Significance, Interaction of EMR with Atmosphere and Earth's Surface: Absorption, Reflectance and Scattering, Atmospheric Windows, Energy Balance Equation, Spectral Response and Spectral Signature, Spectral, Spatial, Temporal and Radiometric resolutions, Concept of Satellite, sensor, orbit. Satellite image and various interpretation techniques, digital image processing techniques.

Unit- II: Data Acquisition

Platform: Balloon, Rocket, Helicopter, Aircraft and Spacecraft. Aerial vs. Satellite Remote Sensing, Satellites and their Specifications: LANDSAT, SPOT, ENVISAT, RADARSAT, IRS, IKONOS, Sensors and their Specifications: MSS, TM, LISS (I,II,III,IV), PAN, WiFS, AWiFS, MODIS, Weather & Communication Satellites: Open data sources.

Unit- III: Basic Concepts of GIS

Definition, Philosophy & Historical evolution of GIS, Spatial vs. non-spatial data, Components of GIS, Spatial data models - Raster and Vector; advantages & disadvantages, Raster Data & its Representation: Data Structure & File format, Data Compression (block code, chain code, run length code, quadtree, MrSID), Vector data representation: Data Structure & File format; Topology, Advantage of DBMS in Context of GIS; Data input and projections, geometric transformation of raster and vector data.

Unit -IV: Satellite Positioning System - An Overview

Introduction to Global Navigation Positioning System, Various Global Regional Satellite constellations, NAVSTAR GPS signals, Geo-positioning - Basic Concepts, Pseudo Range Measurement, Phase Difference Measurement, Sources of GNSS errors: Datum/Ellipsoid - definition and basic concepts, Global Datum vs. Indian Geodetic Datum, Coordinate Systems, Transformation of coordinates, GNSS Remote Sensing.

Unit- V: DRR using GIS and RS (Practical)

Hazard Evaluation and Zonation Risk and Vulnerability Assessment, Damage assessment - Land use planning and regulation for sustainable development, Practices for Disaster Risk Management (Hydrological, Environmental and Health); Case Studies.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER SECOND

PAPER – 201

Pandemic Preparedness & Response

Unit I: Emerging and Re-Emerging diseases

Emerging diseases, Remerging diseases, Factors that favour emergence of new diseases, Zoonotic diseases, Overview of most common emerging and Re-Emerging diseases, Epidemic and Pandemic.

Unit II: Outbreak Investigation

Definition of Outbreak, criteria for establishing outbreak, steps of Outbreak infection, Prevention of outbreaks, Trigger alerts, Principles and methods of investigations Food, Water, Air, Vector borne outbreaks.

Unit III; Disease surveillance

Concept of surveillance, Types of surveillance, Surveillance design, IDSP, Surveillance, Surveillance Evaluation, Components of Surveillance system, EWARS, Indicator based surveillance, Event based surveillance system, Application Big data and Artificial intelligence as early warning systems.

Unit IV: Pandemic Disease

Influenza epidemiology, How diseases become Pandemics, Impact of Pandemic to global security and economics, WHO Pandemic Stages, International Health Regulations.

Unit V: Pandemic preparedness

Developing Early warning systems, Rapid Response teams, Capacity building, Training, Rumor Reporting, Public Health emergencies of International concern.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER SECOND

PAPER – 202
FINANCE RESILIENCE AND RISK TRANSFORMATION

Objectives:

To provide the understanding of life & non-life insurance, banking and other related issues pertaining to the finance sector.

Module1 Introduction to Banking & Finance

Concept of Banking, Types of banks, Functions of banks; Tax administration; Public budgeting and finance systems; State and local finances.

Module 2 Central Bank / Reserve Bank

Role and function of central bank, RBI and Monetary Policy

Module 3 Introduction to Insurance

Evolution and Features of Insurance, Classification of Insurance, Conditions relating to risk, selection or Risk

Module 4 Life Insurance & General Insurance

Principles of LIC, Privatization of Life Insurance Business, Role and performance of LIC, Non-life insurance – Fire, Automobile, Marine, Health, Rural, Social and miscellaneous insurances.

Module 5 Insurance Policies for Disaster Management

Evaluation of risk funding and risk transfer policies; Catastrophe insurance pool; Reserve funds and contingent credit policies; Role of Government and market participants; Insurance policy design; Fiscal cost of relief and reconstruction; Grants and low interest loan for reconstruction.

Course Outcome:

Students will be able to understand the role of various financial agencies in providing financial support during disaster.

Suggested readings:

- Money, Banking & Public Finance – T.N.Hajela- Anc Books Pvt ltd-8th Edition.
- Banking and Financial Markets in India – BhasinNiti-New Century Publications-1947 to 2007.
- Banks & Institutional Management- Vasant Desai-Himalaya PublishingHouse-1st Edition.

- Banking theory and practices – K.C.Shekhar, LekshmyShekhar – Vikas Publishing House-19th Edition.
- Insurance principles & practice –M.N.Mishra, S.B.Mishra -S.Chand Publication- 17th Edition
- Life Insurance in India- H. Sadhak (Response Books) 1stEdition
- Insurance in India- P.S.Palande, R.S.Shah, M.L.Lunawat (Response Books) 6th Edition

National Disaster Response Plan, NCDM, New Delhi, 2001

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER SECOND

PAPER – 203
REHABILITATION, RECONSTRUCTION AND RECOVERY

Objectives

- To understand post disaster issues in recovery and rehabilitation
- To undertake reconstruction as an opportunity to build disaster resilient structures and safe habitat

Module 1 Rehabilitation, Reconstruction and Development

Unit 1: Reconstruction Rehabilitation and Development- Concept, Meaning, types of Rehabilitation and Reconstruction, Importance of Disaster Mitigation, Cost – benefit analysis, relationship between vulnerability and development

Unit 2: Damage Assessment- Post Disaster Damage assessment, estimated damage assessment due to probable disasters, Sample Surveys, Epidemiological Surveillance, Nutrition Centered Health Assessment, Remote sensing and Aerial photography, nature and damage to houses and infrastructure due to different disasters

Unit 3: Role of Different organization in Rehabilitation

The Government and Disaster Recovery and rehabilitation; Disaster and Non governmental efforts ; Role of Local Institutions; Insurance, Police , Media

Module 2 Reconstruction

Unit 1: Speedy Reconstructions- Essential services, Social infrastructures, immediate shelters/camps, Contingency plans for reconstructions

Unit 2: Development of Physical and Economic Infrastructure- Developing Physical and Economic Infrastructure, Environmental Infrastructure development,

Unit 3: Disaster resistant House Construction- Guidelines for Disaster resistant construction, traditional techniques, Seismic strengthening of houses in low rain/High rainfall area, earthquake resistant construction technique

Unit 4: Funding arrangements- Funding arrangements at state level and central level, Fiscal discipline, role of International agencies, mobilization of community for resource generation

Module 3 Rehabilitation

Unit 1: Socio- economic Rehabilitation- Temporary Livelihood Options and Socio-Economic Rehabilitation,

Unit 2: Role of Housing / building authorities- Education and awareness and role of Information Dissemination, Participative Rehabilitation

Unit 3: Role of various agencies in Recovery Work- Monitoring and evaluation of

rehabilitation work, Rehabilitation process

Module 4 Recovery

Concept of recovery, livelihood and approach to reconstruction, Livelihood restoration, Speedy recovery, Linking Recovery with safe development, Creation of Long-term job opportunities,

Course outcome:

This Course will help students in building safer environment through sustainable development. At the end of this course students are expected to carry out pre and post disaster damage assessment, understand disaster recovery and role of different agencies in the rehabilitation.

Suggested Readings:

- Asian Development Bank, Disaster Mitigation in Asia and the Pacific, Manila ADB, 1991.
- Disaster Administration and Management, Text & Case studies- SL Goel-Deep and Deep Publications
- Disaster Management- G.K Ghosh-A.P.H. Publishing Corporation
- Disaster management – S.K.Singh, S.C. Kundu, Shobha Singh A – 119, William Publications, New Delhi.
- Disaster Management – Vinod K Sharma- IIPA, New Delhi,1995
- Encyclopedia of Disaster Management- Goel S.L. - Deep and Deep Publications, New Delhi, 2006.
- Post-Earthquake Rehabilitation and Reconstruction , F.Y. Cheng, Y.Y. Wang, Permagon Publications

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER SECOND

PAPER – 204 A

Health Emergencies and Disaster Management

Unit I: Health systems and infrastructure

Introduction; Prioritizing health services; Supporting national and local health systems - Coordination; Primary Healthcare services; Clinical Services; Health Information System Human resources; Financial management for humanitarian response; Monitoring and evaluating the systems.

Unit II: Emergency health services

Introduction; Resilient Health Systems and Infrastructure; Planning Emergency Health services; Mass casualty management; Emergency medical care; Mass event with long-term major implications; Mass event of immediate, limited implication; Intermediate events causing temporary displacement; Mass event long term displacement; Managing essential drug supplies; Post-emergency phase.

Unit III: Emergency Mental Health and Psychosocial Support

Introduction; Stressors, protective factors, and mental health disorder in emergencies; General measures and psychosocial support; Risk factors and intervention strategies; The minimum initial services package (MISP); Maternal health and safe motherhood; Infant and young child feeding in emergencies.

Unit IV: Control of Communicable Diseases

Introduction; Communicable diseases as public health threats; Principles of communicable disease control; General approach for setting up disease control programmes; Major disease in emergency and non-emergency settings; Diseases from the animal sector and other emerging diseases; Monitoring, evaluation and research for disease control programmes.

Unit V: Water, Sanitation and Hygiene in Emergencies

Introduction; Diseases related to water, sanitation and hygiene; Community involvement in disease prevention and mitigation; Improving environmental conditions; Excreta disposal; Water quantity and Water quality; Hygiene and Food safety; Vector borne diseases control; Solid waste management ; Drainage Lineation; Water and sanitation in cholera outbreak response; guidelines for institutions.

POST GRADUATE DIPLOMA IN DISASTER MANAGEMENT

DETAILED SYLLABUS

SEMESTER SECOND

PAPER – 204 B

OCCUPATIONAL HEALTH AND FIRE SAFETY MANAGEMENT

Unit - I: Occupational Hazard

Occupational Hazards - Physical Hazards, Chemical Hazards and Biological Hazards - Radiation Hazards - Psychological Hazards - Work Related Musculoskeletal Disorders - carpal tunnel syndrome CTS- Tendon pain disorders of the neck- back injuries - Indian Occupational Safety Scenario.

Unit - II: Occupational Health and Toxicology

Concept and spectrum of health - functional units and activities of occupational health services, pre-employment and post-employment medical examinations - occupational related diseases, levels of prevention of diseases, notifiable occupational diseases - effects and prevention cardio pulmonary resuscitation, audiometric tests, eye tests, vital function tests - Industrial toxicology, local, systemic and chronic effects, temporary and cumulative effects, carcinogens entry into human systems.

Unit - III: Accident Investigation and Reporting

Incident Recall Technique (IRT), disaster control, Job Safety Analysis (JSA), safety survey, safety inspection, safety sampling, Safety Audit. Concept of an accident, reportable and non-reportable accidents, unsafe act and condition - principles of accident prevention- Role of safety committee - Accident causation models - Cost of accident. Overall accident investigation process - Response to accidents, India reporting requirement, Planning document, Planning matrix, Investigators Kit, functions of investigator, four types of evidences, Records of accidents, accident reports.

Unit - IV: Fire Safety

Fire properties of solid, liquid and gases - fire spread - toxicity of products of combustion - theory of combustion and explosion- Sources of ignition - fire triangle - principles of fire extinguishing active and passive fire protection systems various classes of fires A, B, C, D, E types of fire extinguishers - Sprinkler-hydrants-stand pipes special fire suppression systems.

Unit - V: Regulations for Health, Safety and Environment

Factories act and rules - Workmen compensation act. Indian explosive act - Gas cylinder rules - SMPV Act - Indian petroleum act and rules. Environmental pollution act Manufacture, Storage and Import of Hazardous Chemical rules 1989 Indian Electricity act and rules. Overview of OHSAS 18000 and ISO 14000.