Programme Project Report (PPR)

Name of Programme: PG Diploma in Disaster Management

a) **Programme mission and objectives:** The mission of programme in Disaster Management is to bring awareness among the youth regarding disaster preparedness, mitigation and rehabilitation so that they may play a key role during any disaster situation. This is possible only when youth are educated on the subject matter. Dealing with disaster has always been a challenge for human kind because disasters recognize neither land nor people. Areas like Uttarakhand are very prone to disasters of diverse nature. Therefore, awareness, education and training on the subject are very crucial in the State. Through academic courses and project based field activity, learners will be able to know about the various kinds of disasters, the harmful effects, and how to cope with the situation. The objectives of Post Graduate Diploma in Disaster Management (PGDDM) are:

- to provide comprehensive knowledge to the learners on disaster preparedness, mitigation, and rehabilitation.

- to equip them with disaster response techniques, risk assessment and vulnerability analysis, communication skills and skills pertaining to emergency medical requirement

- to equip the learners with latest knowledge, technologies, policies, legal initiatives and experience-based skills on disaster management

b) **Relevance of the program with HEIs Mission and Goals:** One of the mission of higher education particularly ODL Institutions is to provide greater opportunities of access to Higher Education with equity to all the eligible persons and in particular to the vulnerable sections. At present, there are very few Universities and colleges that provide education at Masters/ PG Diploma level in disaster management. PG Diploma in Disaster Management in ODL mode will provide opportunity to majority of the aspirants particularly residing in far flung remote areas and in particular to weaker and deprived sections of the society who need to have the subject specific knowledge for their own survival. Further, the aim of the HEIs is to fulfill the region specific requirements. In case of Uttarakhand (As being very fragile), the knowledge and awareness on disaster management is very essential.

c) **Nature of prospective target group of learners:** The target group of learners are those who are working professionals is such departments which are directly related or that directly deal the disaster situations. These belong to Non-Governmental Organisations, Governmental Organisations such as

Police Department, Forest Department, ITBP, Armed forces, Medical department, etc. Furhter, those learners who wish to opt career in disaster related organisation such as NGOs or Governmental organization will also be the prospective learners for the programme such as Ministry of Environment, State Disaster management cell, Forests and Climate Change, State Forest Department, Environmental Management etc. and or/ Non-Government organizations such as The Energy Resource Institute (TERI), World Wildlife Fund (WWF), International Union for Conservation of Natural Resources (IUCN) and other Environmental Conservation and Sustainable development based organizations, will be the target group of learners.

d) **Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:** There are very few institutions/ Universities/ Colleges in India that impart education on Disaster Management. Therefore, access to knowledge on the subject is not accessible to the learners. Therefore, initiating such programme in Open and Distance Learning (ODL) mode will help aspirants particularly residing in far-flung areas and those who belong to weaker sections, to acquire skill and knowledge on the subject area. The subject is more important particularly in case of Uttarakhand as the State has very fragile geography and faced disasters of varied nature. Further, accessibility of people and villages is also difficult, therefore, conduction of the programme in ODL mode is appropriate and will cater to a larger section of the society. In order to communicate effectively with the learners University has adopted the following tools:
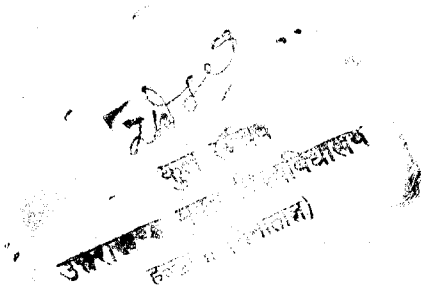
- self-instructional printed material
- audio / video cassettes and CDs
- audio-video programmes transmitted through FM Radio and EduSat
- face-to- face counselling at study centres by academic counselors
- reference library at study centre
- web based academic support
- assignments
- practical

e) **Instructional design:**

i) Curriculum design: The Programme structure has been adopted from IGNOU. The programme structure is as follows:

Course code	Name of Course	Credits
MPA-001	Understanding Natural Disaster	04

MPA-002	Understanding Man-made disasters	04
MPA-003	Risk Assessment and Vulnerability Analysis	04
MPA-004	Disaster Preparedness	04
MPA-005	Disaster Response	04
MPA-006	Disaster Medicine	04
MPA-007	Rehabilitation, Reconstruction and Recovery	04
MPAP-001	Project work	04

ii) Detailed Syllabi:

MPA-001   UNDERSTANDING NATURAL DISASTER

Syllabus: Meaning and nature of natural disasters; effects of disaster; Regional and seasonal distributions; Efforts to mitigate natural disasters at the national, and global levels; Concept of disaster management; National disaster management framework; Financial arrangements; Role of NGOs, Community Based Organisations, and media; Understanding the nature and management of flood disasters; Flood prone areas; Causes and impacts of floods; Structural and non-structural measures; Preparedness and response system in India; Remedial measures; Drought management: impact of drought and response system; Cyclones in tropical areas; Adverse effects of cyclones; Hazards associated with tropical cyclones; Earthquakes disasters in India and their management, and risk mitigation techniques; earthquake occurrence; hazards associated with them and their impact;Types, causes, impacts, and risk reduction measures of landslide disaster; Landslide disaster management in India; Role of Geological Survey of India as the Nodal Agency for landslide management

.**Objective:** To understand the various natural disasters, their causes and impacts.

UNIT SCHEDULE

Unit I	Understanding Natural Disasters
Unit 2	Understanding Disaster Management
Unit 3	Flood
Unit 4	Flood: Case Studies
Unit 5	Drought
Unit 6	Drought: Case Studies
Unit 7	Cyclone
Unit 8	Cyclone: Case Studies
Unit 9	Earthquakes
Unit 10	Earthquakes: Case Studies
Unit 11	Landslides
Unit 12	Landslide: case studies
Unit 13	Avalanches
Unit 14	Avalanches: case studies
Unit 15	Volcanic erruptions
Unit 16	Volcanic eruptions: Case studies
Unit 17	Heat and cold waves
Unit 18	Climate change: global warming
Unit 19	Climate change: sea level rise
Unit 20	Climate change: Ozone layer depletion

MPA002   UNDERSTANDING MAN MADE DISASTERS

Syllabus: Meaning and nature of man-made disasters; Origin and causes of man made disasters; different types of man-made such disasters; Nuclear Disasters: causes and impacts of nuclear disasters, management system; Chemical Disaster: chemical hazards, causes and impacts of chemical disasters, preparedness and response activities for mitigation of chemical disasters; Biological disaster: causes and adverse effects of biological disasters; Building fires: causes and impacts of building fires, types, safety and preventive measures; Coal fires: phenomenon and the disaster, causes and impacts of coal fire in India, coal fire disaster management; Forest fires; Oil fire; Air pollution; Water pollution; Deforestation; Concept of industrial wastewater pollution and characteristics of industrial effluents, disastrous impacts; Road accidents; Air accidents; Sea accidents; Disaster Mitigation Action Plan, including the international preventive measures against sea accidents

.**Objective:** The objective of this course is develop an understanding on the different man made disaster and their management

UNIT SCHEDULE
Unit 1:   Understanding Man-Made Disasters
Unit 2:   Nuclear Disasters
Unit 3:   Chemical Disasters
Unit 4:   Biological Disasters
Unit 5:   Building Fire
Unit 6:   Coal Fire
Unit 7   Forest Fire
Unit 8   Oil Fire
Unit 9   Air Pollution
Unit 10   Water Pollution
Unit 11   Deforestation
Unit 12   Industrial Wastewater Pollution
Unit 13   Road Accidents
Unit 14   Rail Accidents
Unit 15   Air Accidents
Unit 16   Sea Accidents

MPA-003   RISK ASSESSMENT AND VULNERABILITY ANALYSIS

Syllabus: Difference between hazards and disasters, classification of disasters, vulnerability factors, vulnerability and risk assessment; Concept of risk and elements at risk, risk management, vulnerabilities related/emerging concepts, societal risk management, perception of risk, and acceptable risk; essentials of risk reduction and targets for risk reduction with respect to specific natural hazards; Risk assessment: understanding risk assessment and examining the process of risk assessment by measuring risks and using statistical models for risk assessment, different methods and models; Participatory Risk Assessment: community participation for risk assessment, rationale of people's participation in risk assessment and analyse the participation between the community and government organisations, participatory risk assessment methods; Vulnerability Analysis and Risk Assessment: understanding the concept and significance of vulnerability analysis and risk assessment; vulnerability as a socially constructed phenomenon, local people's perception of vulnerability; Vulnerability Identification: vulnerability identification, indicators of vulnerability; social vulnerability; relationship between gender, poverty and vulnerability; vulnerability of children, weaker

sections and disabled people; understand the economic dimension of vulnerability; Vulnerability to Shanty Settlements; Strategies for survival; vulnerability and development; resource analysis and mobilization; strategic developments for vulnerability reduction.

.**Objective:** To understand various kinds of hazards, risk, their assessment and analysis.

UNIT SCHEDULE

Unit 1	Hazard, Risk and Vulnerability
Unit 2	Understanding Risk: Concepts and Elements
Unit 3	Risk Reduction
Unit 4	Risk Analysis Techniques
Unit 5	Participatory Risk Assessment
Unit 6	Vulnerability Analysis and Risk Assessment
Unit 7	Observation and Perception of Vulnerability
Unit 8	Vulnerability Identification
Unit 9	Vulnerability: Social Factors
Unit 10	Vulnerability: Economic Factors
Unit 11	Vulnerability to Shanty Settlements
Unit 12	The Experience of Vulnerability-I
Unit 13	The Experience of Vulnerability-II
Unit 14	Strategies for Survival
Unit 15	Vulnerability and Development: The Role of Development Planning
Unit 16	Resource Analyses and Mobilisation
Unit 17	Strategic Developments for Vulnerability Reduction

MPA 004   DISASTER PREPAREDNESS

Syllabus: Concept of disaster management and its main components; components of disaster prevention, preparedness and mitigation; concept and significance of disaster preparedness and its important measures; mapping, preparedness plan, land-use zoning; significance and concept of planning in the context of disaster preparedness; Disaster Preparedness for People with Special Needs/Vulnerable Groups; Disaster Preparedness with Relevance to Housing, Infrastructure and Livestock; need and significance of community-based disaster preparedness; Nature and significance of IEC and training; Disaster Preparedness: Role and Responsibilities of Central, State, Administration, Armed Forces, Police, Para-military Forces, National Service Scheme and Scouts, International Agencies, Non-governmental Organisations, Community-based Organisations, Community and Media; Role of information technology in disaster preparedness; Use and Application of Emerging Technologies in Disaster Preparedness: HAM radio, wireless, Emergency operating centres; concept and significance of disaster mitigation; efforts of administration, politicians, community, NGOs; Disaster Mitigation Strategies; significance of teamwork; conflict resolution and its important techniques.

Objective: The main course objective is to explain the concept of disaster management, prevention, preparedness and mitigation

UNIT SCHEDULE

Unit 1	Disaster Management: Prevention, Preparedness and Mitigation
Unit 2	Disaster Preparedness: Concept and Nature
Unit 3	Disaster Preparedness Plan

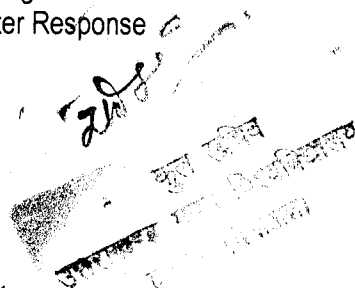| Unit 4	Disaster Preparedness for People with Special Needs/Vulnerable Groups
Unit 5	Disaster Preparedness with Relevance to Housing, Infrastructure and Livestock
Unit 6	Community-based Disaster Preparedness Plan
Unit 7	Role of Information, Education, Communication and Training
Unit 8	Disaster Preparedness: Role and Responsibilities of Central, State, District and Local Administration
Unit 9	Disaster Preparedness: Role and Responsibilities of Armed Forces, Police, Para-military Forces, National Service Scheme and Scouts
Unit10	Disaster Preparedness: Role and Responsibilities of International Agencies, Non governmental Organisations, Community-based Organisations, Community and Media
Unit11	Information Technology: Role in Disaster Preparedness with Special Reference to Geographical Information System
Unit12	Use and Application of Emerging Technologies in Disaster Preparedness - I
Unit13	Use and Application of Emerging Technologies in Disaster Preparedness - II
Unit14	Disaster Mitigation
Unit15	Disaster Mitigation Strategies
Unit16	Emerging Trends in Disaster Mitigation - I
Unit17	Emerging Trends in Disaster Mitigation - II
Unit18	Mitigation Management - I
Unit19	Mitigation Management - II

MPA 005   DISASTER RESPONSE

Syllabus: Disaster Response Plan: importance, role of international agencies, NGOs, community based organisations in the response plan; importance of communication, participation in the activation of emergency plans; Logistic Management; Needs and Damage Assessment; role played by different ministries and departments at centre, state and district level, police, para military, in dealing with disaster response; capabilities and the resourcefulness of Armed Forces; Psychological Response; Trauma and Stress Management: concept of trauma, the meaning and the nature of the stress, types and sources of stress and management of stress; meaning of rumour, the concept of panic and management of panic situation; management of relief commodities, supply and services; Funding Relief; Recovery: recovery process, challenges associated with the recovery process and also examine the implications of human factors involved.

Objective: To understand concept of disaster response and role of different stakeholders in it

UNIT SCHEDULE

Unit 1	Disaster Response Plan
Unit 2	Communication, Participation and Activation of Emergency Preparedness Plans
Unit 3	Logistic Management
Unit 4	Needs and Damage Assessment
Unit 5	Disaster Response: Central, State, District and Local Administration
Unit 6	Armed Forces in Disaster Response
Unit 7	Disaster Response: Police and Other Organisations
Unit 8	Role of Multiple Stakeholders in Disaster Response
Unit 9	Psychological Response
Unit 10	Trauma and Stress Management
Unit 11	Rumour and Panic Management
Unit 12	Minimum Standards of Relief

Unit 13   Managing Relief
Unit 14   Funding Relief
Unit 15   Recovery

MPA 006   DISASTER MEDICINE

Syllabus: Disaster medicine: meaning and significance of disaster medicine; importance of post-disaster review, documentation, and future planning and research in disaster medicine; meaning, methods, and various procedures of epidemiological studies; importance of epidemiological data in preventive strategies, early warning and evacuation, health effects analyses; prevention of risk factors; Medical preparedness plan; Logistics management; Remote area planning; t of community education and training in all aspects of disaster medicine, such as, planning, preparedness, risk evaluation, medical response, psychological rehabilitation, evaluation, debriefin; pre-hospital phase, that is, disaster site management; emergency management in hospitals; ility of potable water, hygiene and sanitation, vector control, garbage disposal and food safety in the community at times of disasters; Medical and health response to different disasters; Role of information and communication technology in health response; Psychological rehabilitation

Objective: To understand role of medical preparedness during and after emergencies and disasters

UNIT SCHEDULE

Unit 1   Understanding disaster medicine
Unit 2   Epidemiological study of disasters
Unit 3   Prevention of risk
Unit 4   Medical preparedness plan
Unit 5   Logistics management
Unit 6   Remote area planning
Unit 7   Education and training in health management of disasters
Unit 8   Disaster site management
Unit 9   Clinical casualty management
Unit 10   Community health management
Unit 11   Medical and health response to different disasters
Unit 12   Role of information and communication technology in health response
Unit 13   Psychological rehabilitation
Unit 14   Practical manual
Unit 15   Case studies of medical and health interventions in disaster management

MPA 007   RECONSTRUCTION, REHABILITATION AND RECOVERY

Syllabus: Disasters and development; Damage Assessment: techniques and tools of damage assessment; Role of Various Agencies in Disaster Management and Development; concept of vulnerability in the context of disasters; Development of Physical and Economic Infrastructure; concept of livelihood; significance of livelihood perspective to disaster management; overview of the process of reconstruction and its significance in post-disaster times; hazard vulnerability in India and identifies the disaster prone areas in the country; Disaster Resistant House Construction; of governmental, non-governmental and international agencies in reconstruction in the post-disaster phase; significance of education, training and awareness in disaster management; tance and scope of education, awareness and training in disaster mitigation; Dealing with Victims' Psychology; Role of Information Dissemination; role of urban and rural local bodies in disaster recovery; concept and

objectives of monitoring and evaluation; objectives of monitoring, reasons behind inadequate monitoring and the interrelationship between monitoring; incorporating local needs into the rehabilitation process; important issues related to inclusion of sustainability, capacity building, risk management, total quality management and participatory planning.

Objective: To understand role of medical preparedness during and after emergencies and disasters

UNIT SCHEDULE

Unit 1   Reconstruction and Rehabilitation as Means of Development
Unit 2   Damage Assessment
Unit 3   Role of Various Agencies in Disaster Management and Development
Unit 4   Information Management Structure
Unit 5   Parameters of Vulnerability
Unit 6   Development of Physical and Economic Infrastructure
Unit 7   Creation of Long-term Job Opportunities and Livelihood Options
Unit 8   Funding Arrangements for Reconstruction
Unit 9   Nature of Damage to Houses and Infrastructure due to Disasters
Unit 10   Disaster Resistant House Construction
Unit 11   Role of Housing/Building Authorities
Unit 12   Education and Awareness
Unit 13   The Philosophy of Coping with Disasters
Unit 14   Dealing with Victims' Psychology
Unit 15   Role of Information Dissemination
Unit 16   Participative Rehabilitation Process: Some Case Studies
Unit 17   Role of Various Agencies in Recovery Measures
Unit 18   Monitoring and Evaluation of Rehabilitation Work
Unit 19   Constraints in Monitoring and Evaluation
Unit 20   Long-term Recovery
Unit 21   Long-term Counter Disaster Planning

MPAP-001   PROJECT WORK

iii) Duration of the programme: Minimum duration of programme is one (01) years and maximum duration if three (03) years

iv) Faculty and support staff requirement: One Permanent Faculty is available in Department of Forestry and Environmental Science, School of Science.

v) Instructional delivery mechanism: The programme will be offered in the Open and Distance Learning (ODL) mode. Guided self study using print (SLM) and electronic media; lecture/ counseling sessions; special counseling sessions and group interactions in Workshop at cluster level; debate on key environmental issues; self-reliant study activities; individual / group work assignment; through MOOC; Project work. The delivery material will include printed SLM, assignment, Face to face

counseling at the designated study centres during Saturday and Sundays. Face to Face session for project guidance at Study Centre level.

f) Proceedure for admission, curriculum transaction and evaluation

Eligibility: Graduation in any discipline

Fee structure: Rs. 10000 per annum

Evaluation norms: A learner will be evaluated through continuous evaluation (Assignments) and term end evaluation (Term end examination) at the end of semester. Continuous evaluation will carry 20% weightage whereas term end evaluation will carry 80% weightage.

g) Requirement of the laboratory support and Library Resources: Laboratory is not required for the programme. Uttarakhand Open University has a library at its Haldwani campus and Dehradun campus which can be utilized by the learners. Further, library resources are also available at Study Centres which can also be utilized by the students.

h) Cost estimates for development of the programme: At present university is using SLM resource of Indira Gandhi National Open University (IGNOU).

i) Quality assurance mechanism and expected programme outcomes: The programme will help in the development of professionally skilled and sound indigenous human capital with interdisciplinary perspective and will be capable of dealing with disaster situations and contribute effectively in management of various disasters. University is availing quality SLM from IGNOU at present and in future, University will develop its own SLM.

Programme outcomes:

- Learners will have awareness with regard to diversity of disaster situations and will be capable of managing the situation
- Professionally- sound indigenous human capital with interdisciplinary perspective for services related to disaster preparedness, response and rehabilitation, rural development will be developed
- Bridge the flow of information between civil society, professionals, corporates, and policy and decision-makers