

## M. Sc. Disaster Management Courses Effective from 2021 onward

### Core Courses

Ref. No	Course Title	Credit Hour	Contact Hour
DM-601	Introduction to Disaster Management	03	03
DM-602	Disaster Risk Assessment	03	03
DM-603	Disaster Planning and Management	03	03
DM-604	Emergency Response Management	03	03
DM-605	Disaster and Development	03	03
DM-606	Natural Hazards of Pakistan	03	03
DM-607	Community Based Disaster Risk Management	03	03
CRP-604	Advanced Research Methods	03	03
DM-609	Disaster Response and Recovery	03	03
DM-610	Disaster Risk Reduction and Preparedness	03	03
DM-611	Fundamental of GIS and RS in Disaster Management	02 (Th) + 01 (Pr)	02 (Th) + 01 (Pr)
DM-612**	Climate Change Adaptation and Mitigation	03	03
DM-613**	Resilience through Sustainable Development	03	03

\*\* Added in the existing course of HEC Curriculum of M.Sc. Disaster Management

### Elective Courses

Ref. No	Course Title	Credit Hour	Contact Hour
DM-614	Management of Desertification of Hazard	03	03
DM-615	Disaster Management and Economy of Pakistan	03	03
DM-616	Disaster Management Policies	03	03
DM-617	Disaster Risk and Vulnerability Assessment	03	03
DM-618	Disaster Risk Financing	03	03
DM-619	Disaster Risk and Urbanization	03	03
DM-620	Management of Drought Hazard	03	03
DM-621	Management of Earthquake hazard and mitigation	03	03
CRP-634	Environmental Impact Assessment	03	03
DM-623	Management of Flood Hazard	03	03
DM-624	Forecasting of Hydro-Meteorological Hazards	03	03
DM-625	Gender Mainstreaming in Disaster Management	03	03
DM-626	Impacts of Climate Change and Disasters in Pakistan	03	03
DM-627	Management of Landslide Hazard	03	03
DM-628	Disaster Planning and Management in Pakistan	03	03
DM-629	Psychological Impacts of Disaster and its Management	03	03
DM-630	Media and Disaster	03	03

Ref. No	Course Title	Credit Hour	Contact Hour
DM-631	Urban Safety	03	03
DM-632	Infrastructure Development	03	03
DM-633	Hazards and Urban Planning	03	03
<b>Compulsory for All</b>			
CRP-622	Research Thesis (compulsory only for thesis option)	06	12

<b>Approved Scheme of Study</b>	
<b>Course Details/Catalog Description</b>	
Course No.	Group-A Core Courses (Four Courses to be selected from the following)
<b>DM-601</b>	<p><b>Introduction of Disaster Management</b></p> <p>Introduction to Disaster Management Definitions, Environmental Processes, Extreme Natural Events, Man and Environment Relationship, Hazards and Resources, Types of Natural Hazards  Man-made Hazards, Disasters and its Types, Causes, Consequences and Impacts of Disasters  Disaster Management Cycle, Vulnerability and its types, Capacity and its types, Risk.</p>
<b>DM-602</b>	<p><b>Disaster Risk Assessment</b></p> <p>Basic Concepts (Geomorphologic Process, Natural Hazard, Disaster, Vulnerability, Capacity and Risk)  Hazard Assessment  o Type, Nature of Occurrence, Location, Density, Intensity, Frequency  o Data Available and Quantifying the Hazards Vulnerability and/or Exposure Assessment  o Elements at Risk and Quantifying the Elements at Risk  o Acceptance Level and Limitations Capacity Assessment  o Classification, Level and Dimension of Capacities  o Quantifying the Capacities</p> <p>Risk Assessment  o Characteristics of Risk, Dynamic Pressure, Underlying Causes, the Progression of Vulnerability, and Disaster Crunch Model.  o Matrix of Risk, Risk Record and the Probability of Risk Decision Making  o Limitations of Risk Assessment, Cost-Benefit Analysis, Acceptance Level of Risks, Risk Management and National Development, Best Option Considerations</p>

<b>DM-603</b>	<p><b>Disaster Planning and Management</b></p> <p>Introduction to Disaster Planning and Management, Planning Process, Disaster Management</p> <p>Significance of Disaster Planning and Management, Disaster Management Cycle Stages in Disaster Management, Modern Challenges in Disaster Management, National Disaster Risk reduction Policy, Main Elements of National Policy, Disaster Management Plan, Major Requirements for Coping with Disasters, The Basic Philosophy for Coping with Disasters</p> <p>Key Players in Disaster Management, International Disaster Assistance, Role of Government, Communities, Media, NGOs and Policies, Institutional and Legislative Aspects, Mainstreaming Hazards Mitigation into Sustainable Development</p>
<b>DM-604</b>	<p><b>Emergency Response Management</b></p> <p>Disasters and Emergency Situation, The nature of Emergency Situation, Disaster Management and Emergency Management, Phases of Emergency Management (Response, Recovery, Mitigation and Preparedness), Emergency Situation Analysis</p> <p>Emergency Response Organizations (Federal, Provisional, District, Community, Individual, NGOs)</p> <p>Emergency Operation Centre i.e. Major Components of EOC, Organogram, Special Powers (Legislation), Operational Plans, Logistics, Communications</p> <p>Key Stakeholders (Security Agencies, Emergency Response Units, Medical Care Units, Relief and Rehabilitation Organizations, Volunteers etc.)</p> <p>Emergency Mitigation (Risk Assessment, Precautionary Measures, Minimizing the Risk), Preparedness for Response (Training, Planning, Plan, and Institutions)</p>
<b>DM-605</b>	<p><b>Disaster and Development</b></p> <p>Forging the links between disasters and development, NDMA Act 2010, The dilemma of sustainability, The Concept &amp; Historical Perspective of Sustainable Development, Medium Term Development Framework, The Conceptual Relationship between Disasters and Development</p> <p>Disasters A challenge for developing countries and development cooperation, Global Risk Factors, The Disaster Risk Index, Risk Patterns at the National and Local Level, The Millennium Development Goals, Disaster Risk Reduction; An Instrument for Achieving Millennium Development Goals, Disaster and National Development, Assessing the trade-offs in investing in vulnerability reduction, National Developmental Plans/ Legislation of Pakistan, Case studies</p>
<b>DM-606</b>	<p><b>Natural Hazards of Pakistan</b></p>

	<p>Introduction to Natural Hazards and Disasters, Physiography of Pakistan, Climate of Pakistan, Ecological Regions of Pakistan, Seismic Hazards Zone of Pakistan, Major Natural Hazards of Pakistan i.e. Floods, Earthquakes, Tsunami, Landslides, Desertification, Drought , Cyclone, Snow Avalanches, Glacial Hazards, Salinization, Heat and Cold Waves, Sea Water Intrusion Future Disaster Trends in Pakistan, Disasters Management Policies in Pakistan, Case studies</p>
<b>DM-607</b>	<p><b>Community Based Disaster Risk Management</b></p> <p>The concept of Group, Community and Society Social structure and social organization, Perception and Attitude of Community towards Disasters, Community Vulnerability, Theories and Models of Participatory Development, Participatory Tools and Techniques for Capacity, Vulnerability, Hazards and Risk Assessment, Participatory Community Risk Assessment Participatory Disaster Risk Management Planning, Community-Managed Implementation Participatory Monitoring and Evaluation, Building Capacity and Resilience, Disaster Risk Communication/ Awareness in DRR, Mainstreaming of CBDRM in Public Policy, Planning and Implementation. Role of CBOs and NGOs</p>
<b>CRP-604</b>	<p><b>Advanced Research Methods</b></p> <p>Why to do research in planning? Expectations from a piece of research. Types of research. Types of research methods; their use and limitations; principles of selecting appropriate research methods for an inquiry. Research design and research process. Critically evaluating published research.</p> <p>Measurement in the social sciences: validity and reliability and how to assess them. The nature of quantitative and qualitative research and their integration.</p> <p>Philosophy of quantitative research. Experiments and experimental design. Survey research: types and aims of surveys. Sampling and generalization. Structured interviews and self-completion questionnaires: differences between them; relationship to measurement issues. Content analysis. Techniques of analyzing quantitative data. Hypothesis testing and identification of relationships among variables through bivariate and multivariate analysis. Tests of significance.</p> <p>Philosophy of qualitative research. Participant observation. Unstructured interviewing. Field observations. Case study strategy. Qualitative data analysis. Conversation analysis. Focus groups.</p> <p>Presentation of findings, writing-up of the thesis, and dissemination of research work.</p> <p>Managing research projects: mobilizing resources, team building, time management, quality control on performance, confidentiality and ethical issues, progressing and expediting, managing costs and estimation,</p>

	<p>managing conditions of high uncertainty and difficulties in successful completion of research projects.</p>
<p><b>DM-609</b></p>	<p><b>Disaster Response and Recovery</b>  Overview of Response to Disasters  o Planning for response to natural disasters  o Planning for response to man-made disasters  Managing Disasters and Emergences  o Management, Organization and Coordination  o Needs assessment and immediate response, supplies and logistics  o Activating Emergency Notification and Disaster Response Systems  o Resource Mobilization and Allocation  o Communication between Agencies  o Sector Components  o Crisis and conflict management  Disaster Reporting  o Understanding Disaster Reporting  o Phases of Disaster Reporting (pre, during, post)  o Risk Management Regime and Sources of Information  o Current Trends in Reporting Disasters  o Role of Local Media (Role &amp; Obligations)  o Disasters on the News Desks  o Conflict Sensitive Reporting  o Developing a Code of Conduct for reporting disasters  Planning for Recovery and Resettlement, Disaster planning and recovery issues  Relief and Residual Relief, Response and recovery programs (settlement, infrastructure, services, and livelihood, etc), Institutional framework and networking  Reconstruction Overview of the Project Cycle, Disaster Recovery: Issues and Remedies, Entitlement, equity and governance</p>
<p><b>DM-610</b></p>	<p><b>Disaster Risk Reduction and Preparedness</b>  Conceptual and Methodological Issues  o Types of Disasters  o Disaster management stages  o Time Scale (pre, during and post disaster scenario)  o Disaster Classification  o Vulnerabilities, Impact and scale of damage  o Coping Capacities Mechanism  o Classification of damages and effects  o Social, infrastructure, economic, environmental and overall effects of damages  Databases and Disaster Information  o Types and sources of disaster related information</p>

	<ul style="list-style-type: none"> <li>o Development of appropriate databases from community level to the national level</li> <li>o Database coordination, sharing and communication over time and space</li> <li>Disaster Preparedness</li> <li>o Situation Analysis (Risks, vulnerabilities &amp; capacities)</li> <li>o Response Mechanism (existing and required)</li> <li>o Preventive measures / methodologies</li> <li>o Preparedness Planning (Need for preparedness planning, Planning processes and elements)</li> <li>o Mitigation Measures</li> <li>o Coordination</li> <li>o Resource Mobilization</li> <li>o Information Management</li> <li>o Early Warning System (existing and required)</li> <li>o Public Education, Training and Rehearsals</li> <li>Social and Economic Impact Assessment of Disasters</li> <li>o Impact assessment framework/process</li> <li>o Tools and techniques Contingency Planning and its Process</li> <li>o Hazard and risk analysis, contingency prioritization</li> <li>o Scenario building</li> <li>o Preparing a contingency plan for each selected scenario</li> <li>o Rescue, relief, and evacuation planning</li> <li>o Monitoring and updating the contingencies plan Integrating Disaster Preparedness with Development</li> <li>o Mainstreaming DRR into Development</li> <li>o Structural Measures (Disaster shelters, Emergency housing, evacuation shelters, Retrofitting, etc.)</li> <li>o Non-Structural Measures</li> <li>o Legislations and Reforms (Building Code etc.)</li> <li>o Institutional Strengthening Building Safer and Resilient Communities</li> <li>o Risks and Needs of the communities:</li> <li>o Prone to natural disasters</li> <li>o Post disaster communities</li> </ul>
<b>DM-611</b>	<p><b>Fundamentals of GIS and RS in Disaster Management</b></p> <p>Concept and principles of GIS and RS, Historical evolution of Remote Sensing technology,  Passive and Active Remote Sensing, Electromagnetic spectrum,  Interactions with the Atmosphere, Principle of Remote Sensing and Aerial photogrammetry, Methods of interpretation of aerial photographs,  Identification of important features with special reference to hazards, vulnerability, risk mapping, Practical Exercises of photo interpretation,  Data models in GIS, Global Positioning System (GPS) including Use and</p>

	<p>application of GPS in Disaster management, Different types of Resolution, Spectral, Radiometric, Temporal, Spatial</p> <p>Raster data interpretation, Digitization of data, management, handling, editing, Spatial analysis, output and organization, Hazards and disasters data collection for GIS database development.</p>
<b>DM-612</b>	<p><b>Climate Change Adaptation and Mitigation</b></p> <p>Climate change; its impacts, adaptation and vulnerability. Natural and anthropogenic drivers of climate change. Scientific evidence of climate change and peoples' belief. Climate change and water resources. Global climate change impacts; National and international examples of climate change. Regional impacts of global climate change. Climate change impacts: Asia and Pakistan. Climate change related government policies; National Climate Change Policy, Urban flood management Tools,</p> <p>Climate change adaptation – What is it?, Need for climate change adaptation, Types of adaptation, Guiding principles for adaptation, Adaptation policies. Climate change adaptation measures; Climate change adaptation measures on water resources, Regional cases of climate change adaptation measures on water resources. International council for local environmental initiatives (ICLEI) and climate change. Climate change awareness and adaptation practices at local level in developing countries.</p>
<b>DM-613</b>	<p><b>Resilience through Sustainable Development</b></p> <p>Urbanization and sustainable Development, Background to Community Participation for Sustainable Development, Criteria and Indicators for Sustainable Development, Integrated Approaches to Planning and Development of Local Resources, Community Based Strategies for Sustainable Development.</p>
<b>Elective Courses</b>	
<b>DM-614</b>	<p><b>Management of Desertification</b></p> <p>Introduction to Desertification Hazard Management, The Concept of Desertification, The Geomorphic Processes of Wind, Water and Glacier Erosion, Man and Environment Relation</p> <p>Overuse of Resources, Deforestation and Desertification, Aridity and Irrigation, Waterlogging and Salinity, Impacts of Desertification on Agro-based Economy, Mitigation Measures for Desertification, Institutions, NGOs, Community Role in Mitigation the Risk of Soil, Fertility Case Studies of the Arid and Waterlogged Region</p>
<b>DM-615</b>	<p><b>Disaster Management and Economy of Pakistan</b></p> <p>Economic Resilience to Natural and Man-made disasters, Disaster Management in the Economic perspective of governance, Resource allocations to DRR and its critical evaluation, Impacts of disasters on Balance of Trade of Pakistan, Impacts of disasters on economic growth of Pakistan,</p>

	<p>Mainstreaming of Disaster Management into Economic Polices of Pakistan  National Developmental Plans, Role of Development Finance in Disaster Management  Process of financing development in Pakistan, Poverty eradication and sustainable livelihoods  Demand and Supply of Development Finance, Poverty Alleviation and Sustainable Livelihoods</p>
<p><b>DM-616</b></p>	<p><b>Disaster Management Policies</b>  National Platforms for DRR, o Definition, Need, Objectives, Principles, Composition, Major Functions, Guiding principles for policy  Process of policy formulation, implementation and techniques in policy analysis, Organizations with overall Disaster Management Responsibilities in Disaster Management and National Plans  Disaster Management in Regional Bodies  Legislation for Disaster Management, Disaster Management Act 2010, ERRA Act 2011, Civil Defence Act, 1952, The National Calamities Act (West Pakistan Calamities Act), 1958, Local Government Ordinance, 2013, Emergency Services Ordinance, 2002, Environment Legislation  Pakistan Environmental Protection Act, 1997 amdended 2012, Karachi Port Trust (Amendment) Ordinance, 1994, National Fund for Cultural Heritage Act, 1994, Agricultural Pesticides (Second Amendment) Ordinance, 1995, AJK Environmental Protection Act, 1996, Federal Environmental Rules and Regulations, National Disaster Management Ordinance 2006, Analytical review of the international policies and frameworks, Sendai Framework for Action, Yokohama Strategy, The Geneva Mandate, Kyoto Protocol.</p>
<p><b>DM-617</b></p>	<p><b>Disaster Risk and Vulnerabilities Assessment</b>  Risk identification, Understanding of Risk and Hazards, Element at Risk and vulnerabilities, Types of vulnerabilities( social, political, economic and geographical), Scale of vulnerabilities ( local, regional and national level), Risk perception, Theories of Risk Perception, Underlying factors for Risk Perception, Biases of Risk Perception, Types, magnitude and frequency relationship, Risk and uncertainty, Certainty and probability, Hazard prediction - trend projection, Hazard prediction -magnitude/frequency analysis, Catastrophes, Vulnerability and Capacity Assessment (VCA), VCA ; Concepts and Definition, Purpose of VCA, Process of VCA, Outcome of a VCA, Community Based VCA, Disasters and vulnerability, Disasters and development  Formulation of Spatial Data (GIS) including Spatial data quality, decision making and policy analysis, The need for spatial metadata, Deriving data quality information in GIS, Positional accuracy, Completeness and logical consistency, Attribute accuracy, Storing and displaying spatial metadata  Spatial Analysis, Hazard/ Risk mapping, Hazard Mapping and Risk Assessment, Elements of Hazard Mapping, Approaches &amp; Methodologies: Qualitative and Quantitative Risk Mapping, Elements of Hazard Mapping, Data Requirements &amp; Availability, Data Standardization, Target User, Scale,</p>



	Cost and Accuracy, Types of Hazard Mapping, Flood, Landslide, Seismic Community Hazard Mapping, Need for Community Hazard Mapping, Process/ Methodologies, Community Threat, Scientific Information
<b>DM-618</b>	<p><b>Disaster Risk Financing</b></p> <p>Significance of Disaster Risk Financing, Inter-regional disaster risk financing mechanisms, Fiscal disaster risk financing mechanisms at the country level, The role of public-private partnerships in disaster insurance, Cost Benefit Analysis of Disaster Risk Financing, Risk Transfer and Finance Risk Financing Instruments, Micro Credit in DRR, The role of private disaster insurance in disaster risk financing, Financial Arrangement for Disaster Management in Pakistan</p> <ul style="list-style-type: none"> <li>o Risk Mitigation Fund</li> <li>o Drought Emergency Relief Assistance</li> </ul>
<b>DM-619</b>	<p><b>Disasters Risks and Urbanization</b></p> <p>Introduction to Disasters Risk and Urbanization, City Structure, Population distribution in city and social classes Pattern of Urbanization in Developed and Developing Countries, Urbanization (Definition, Causes, Impacts), Population distribution in city and social classes, Problems of Urbanization Hazards in urban environment.</p> <ul style="list-style-type: none"> <li>o Fire, Chemical Hazards, nuclear, epidemics, flood, earthquake, windstorm, hailstorm etc.</li> <li>o Vulnerabilities in urban areas.</li> <li>o Population distribution, Housing structure, Building codes, Accessibility, Emergency services etc.</li> <li>o Geology, hydrology, drainage, soil etc. Risk Reduction Measures.</li> <li>o Improvement of civic services.</li> <li>o Emergency response mechanism.</li> <li>o Hazard specific measures.</li> </ul>
<b>DM-620</b>	<p><b>Management of Drought Hazard</b></p> <p>Introduction to Drought Hazard Management, Climatic Variables Distribution, Arid and Semi-Arid Regions ,Man and Environment Dynamic Relationship, Eco-System and Food Chain, Threshold Population, Drought (Definition, Perception and Variability from Region to Region), Types of Drought, Causes of Drought, Symptoms of Drought, Consequences of Drought, Impacts of Drought, Mitigation Measures for Drought, Sustainable Use of Resources, Key Stakeholders in Drought Management, Community Based Drought Mitigation, Case Studies from Pakistan</p>
<b>DM-621</b>	<p><b>Management of Earthquake Hazard</b></p> <p>Introduction to Earthquake Seismology, Plate Tectonic and Elastic Rebound Theory, Global Distribution of Earthquakes, Folding, Faulting and Fault Lines, Earthquake Hazard and Vulnerabilities, Earthquake and Associated Secondary Hazards, Seismic Zonation and Micro-Zonation, Quantification of Earthquake Hazards, Earthquake Hazard Reduction Measures (Structural and Non-Structural), Structure, Design and Material of the Buildings, Dams,</p>

	Electrical Communication, Transportation etc., Preparedness (Individual, Family, Community, Early Warning System, Institutions, Awareness etc.), Increasing the Capacities and Decreasing the Vulnerabilities, Response, Retrofitting Techniques, Earthquake Risk Analysis
<b>CRP-634</b>	<p><b>Environmental Impact Assessment</b></p> <p>Definition; aim; objectives and role of Environmental Impact Assessment (EIA) in development related decision making. Principles; Trans-boundary issues; Process/stages and techniques of EIA including: screening, scoping, impact identification, assessment, public participation, consideration of alternatives, impact mitigation and management and follow-up monitoring. Requirements and guidelines of international development banks.</p> <p>Legal provisions, guidelines and review/approval process and institutional set-up for EIA in Pakistan. Critical literature on EIA-international and Pakistani cases.</p> <p>Introduction to Strategic Environmental Assessment (SEA); How it differs from EIA; legal requirements of SEA; SEA of policies, plans and programs; International and national practices</p>
<b>DM-623</b>	<p><b>Management of Flood Hazard</b></p> <p>Introduction to Flood Hazard, General Characteristics of Flood, Causes of Floods , Meteorological, Hydrological, Anthropogenic, Flood Intensifying Conditions ,Types of Floods (Riverine flood , Flash flood, Coastal flood, GLOF) Impacts of flood, Basic Principles in Flood Hazard Assessment, Integrated Flood Risk Management, Flood and Development Challenges, Flood Mitigation Measures, Structural (Engineering Protection), Non-structural (Planning and Policies), Early Warning System for Floods</p>
<b>DM-624</b>	<p><b>Forecasting of Hydro-Meteorological Hazards</b></p> <p>Introduction to the forecasting of hydro-meteorological hazards, Meteorology, Vertical and horizontal distribution of temperature and pressure, Types of clouds and precipitation, Measuring instruments, Weather phenomenon, Weather forecast and tools, Physiography Meteorology and Hydrology, Types of hydro-meteorological hazards ,Basic elements of hydro-meteorological hazards (Intensity, density, exposed population and property), Measuring and presentation of the hydro-meteorological hazards (Scale, level and end user) ,Use of modern technology , Major stakeholders (Government, public and international institutions), Forecasting of hydro-meteorological hazards, Early warning system for different hazards.</p>
<b>DM-625</b>	<p><b>Gender Mainstreaming in Disaster Management</b></p> <p>Gender and gender relations in disasters, Women in society, Perspective of gender: A missing element in disaster, Gender inequality, vulnerability and disaster, Gender Specific Needs and Issues, Differential impact of disaster on women in different life cycle stages, Role of women in disaster management, Women involvement in reconstruction and development phase following an</p>

	emergency and/or disaster, Psychosocial considerations: prevention, mitigation and preparedness, Community mobilization through women, Case studies of women responding to disaster, Gender Equality and Human Development Outcomes: Enhancing Capabilities, Case Studies
<b>DM-626</b>	<p><b>Impacts of Climate Change and Disasters in Pakistan</b></p> <p>Introduction to impacts of climate change and disasters in Pakistan, Indicators of climate change, Causes of climate change ,Extreme natural events and climate change, Industrialisation, deforestation and environmental hazards, Causes vs. impacts in global perspective, Pakistan role in climate change, Impacts of climate change in Pakistan, Climate change and hazards vulnerabilities in Pakistan, Agro-based economy and hydro-meteorological disasters, Climate Change Policy of Pakistan Case Studies</p>
<b>DM-627</b>	<p><b>Management of Landslide Hazard</b></p> <p>Introduction to Landslide Hazard Management, Mass-Movement and Landslide, Factors Responsible for Triggering the Landslides, Inventory of the Landslide Hazards, Classification of Landslides, Slope Stability and Instability and their Classification, Elements at Risk, Landslide Risk Assessment, Community Based Landslide Hazard Management, Slope Stabilization i.e. Engineering Methods, Bio-Engineering Methods, Soil Bio-Engineering Methods, Preparedness (Community, Institutions, Awareness, Projects, Early Warning System etc.), Case Studies from Pakistan</p>
<b>DM-628</b>	<p><b>Disaster Planning and Management in Pakistan</b></p> <p>Introduction to Planning for Disaster Management, Significance of disaster planning and management, Physical feature and climate of Pakistan, Risk and vulnerability to hazards and disasters in Pakistan, Basic concept of Disaster Management Cycle i.e. prevention, mitigation, preparedness, disaster impact, response, recovery and development, Awareness and preparedness to natural hazards and disasters in the country; Vulnerability analysis National Disaster Management Policy, Major requirements for coping with disasters i.e. Organization, Planning and Training needs, Modern challenges and Disaster management, Damage assessment, evacuation, rehabilitation and recovery, Formulation of Disaster Management Plan, Existing Institutions and Hazard-Reduction Policies in Pakistan, Natural Hazards Risk and National Development</p>
<b>DM-629</b>	<p><b>Psychological Impacts of Disaster and its Management</b></p> <p>Trauma response i.e. Normal response, Basic principle, Bio psychosocial model, cultural influences, Classification of Psychological Disorders, Depression, Anxiety, Post- traumatic stress disorder, Children in Disasters i.e. Development tasks, risk factors, and childhood traumatic grief, Psychological support i.e. Psychological first aid, coping strategies, and resiliency models, Community Mental health program</p>

<b>DM-630</b>	<p><b>Media and Disaster Management</b></p> <p>Disasters and the media in a global age, The geopolitics of disaster coverage Making disasters mean and politically matter, The making of a newsroom and news editing, Disaster citizenship and assumption of state responsibility, Accountability of disaster news: ethics of disaster reporting, Social media and disaster i.e. The evolution of use of social media in disasters, i.e. Using social media as one part of comprehensive disaster communication programme, Future trends in the use of digital media and its challenges, Essentials of successful disaster communication, Learning the application of communication principles in different, phases of disasters, Understanding disaster communications audience, Managing media relations as a disaster manager, Building an effective plan, strategy and skill for disaster, communication in a changing media world, Terrorism communication challenges, Understanding the role of partners/stakeholders in disaster communication, Class project: Learning best practices of the use of media in disasters through Case studies of successful and failed disaster communication</p>
<b>DM-631</b>	<p><b>Urban Safety</b></p> <p>Current Threats to Urban safety, role of urban policy, planning, Design and governance in enhancing urban safety, Urban crime and violence: a policy response, Security of Tenure: conditions and trends, policy response to ensure insecurity, Policy formulation to increase urban safety, Reducing urban crime and violence.</p>
<b>DM-632</b>	<p><b>Infrastructure Development</b></p> <p>Concept of Infrastructure Development, Types of Social and Physical Infrastructure, Community Integrated Infrastructure Development, Infrastructure Development Issues, Public Private Partnerships (PPPs) for Infrastructure Development, Role of Local Authorities in Infrastructure Development, Population Growth and Infrastructural Facilities, Quality Control of Infrastructure Project</p>
<b>DM-633</b>	<p><b>Hazards and Urban Planning</b></p> <p>Relationship between hazards and urban planning, hazards in urban areas, approaches for hazard and disaster management in master plans, nature of institutional collaboration between planning and disaster management agencies, disasters and emergency planning, policy framework for emergency planning, climate change and planning for sustainable/resilient cities, industrial, earthquake, flood hazards and planning control, policy framework for managing hazards in international and local context, the location aspect in hazard/disaster management, planning for participatory approaches to manage hazard/disaster</p>

