Methodological frame to attain theProgramme specific outcome/programme outcome:-

To attain the programme outcomes of Disaster Management, a combination of pedagogical approaches is recommended and followed by the Department. The course objectives are attained using modern teaching methods, such as interactive and discussion-oriented classroom lectures, group discussions, book reviews, mini projects incorporating technology like ICT. Additionally students are engaging in project-based learning and fieldworkassignments were they collect data and interpret it to learn new ways of research and problem-solving skills. Incorporating tools do this like Remote Sensing, GIS and GPS enhance data analysis and spatial reasoningskills. Here's a more detailed breakdown of methodological approaches:

1. Interactive and Discussion-Oriented Classroom Activities:

- Lectures: Present foundational and theoretical knowledge through plots, figures, and models.
- **Discussions:** Facilitating critical thinking and engagement through group discussion, etc.
- **Case studies:** Analyzing real-world examples and concepts for in Disaster and Risk problem solving.

2. Integrating Technology with Teaching:

- **ICT classes:** Using online resources (lectures, animations, etc.), software, and interactive platforms to enhance in Disaster Managementlearning.
- **Remote Sensing,GIS, Instruments:** Employinginstrumental technologies to teach the concepts of their use, data collection, and data analysis and spatial exploration.
- **Online tools:** Utilizing online platforms for assignments, research, collaborative learning, and real world examples in Disaster Management.

3. Project-Based Teaching and Learning:

- **Fieldwork:**Provides hands-on and investigativeway of data collection and problem solving in real-world environment.
- **Research projects:** Encourages in-depth exploration of specific Hazard and Disaster themes and topics.
- **Group projects:**Fosters collaboration, teamwork, and mutual respect while applying Disaster Management knowledge.

4. Skill Development and Applications:

- **Date Generation and Assimilation:**Teaches the students to generate, download, and compile data for projects and research.
- **Statistical techniques:** Trains students to use statistical methods for analyzing spatial data to understand Disaster Risks.

• Software's and Tools: Develops skills in spatio-temporal modeling and scenario making.

5. Critical Thinking and Problem-Solving:

- **Identifying Hazard Risks:** Identifyingreal worldand specific hazard risks such as floods, earthquakes.
- **Developing Research Skills:** Equipping students with the ability to conduct independent research and draw inferences.
- **Data Analysis and Interpretation:**Developing knowledge skills to understand and evaluate the impact of geophysicaland anthropogenic factors on hazard risks and suggest sustainable mitigation and policymeasures.

6. Community Involvements and Awareness:

- **Real-world Risk Solving:**Visiting the areasimpacted by recent hazard events and understanding their issues using disaster management concepts.
- **Fieldwork and Site visits:** Providing real experiences to students in hazard impacted areas with opportunities to observe and experience natural and anthropogenic hazards and disaster phenomena.
- Stakeholder Meetings and Expert Discussion:Spreading knowledge in communities prone to hazards, inviting guest speakers, experts, and practitioners to share their experiences and insights.

Implementation of these methodological approaches helps to effectively equip students with the knowledge, skills, and critical thinking abilities necessary to excel in the field of academics, research as well as in the disaster risk reduction and policy making at different levels.

Programme Specific Outcomes (PSOs) inDisaster Management:

Programme specific outcomes in the M.A/M.Sc. Disaster Management Programme focus on the generic and subject-specific knowledge and skills, which includegaining experiences and aptitudes from national and global examples and the achievement of which helps the students be able to demonstrate themselves at different stages of their carrier and prepare for further studies, employment, and research. These objectives help ensure the comparability of learning levels, academic standards and competence of students across universities. The PSOs for Disaster Management programme and all its courses are attained through;

- 1. **KeySubject Concept**:Understanding, interpret and analyze various concepts and theories ofhazards, disasters, vulnerabilities, capacity and adaptation.
- 2. Understanding Geophysical Environments: Understanding of natural environment and processes of geography, geology, environment, and atmospheric processes by evaluating their spatial and temporal variabilities.
- 3. Understanding Multi- and Specific Hazards and Risks: Understanding hazards,

risks, vulnerabilities, and coping and adaptive capacities of communities through knowledge and identify nature-based solutionsfortheir solution.

- 4. **Regional, National and International Scenarios of Hazard Risks**: Understanding and reviewing hazard risks at multi-scale and multi-sector levels and understand their scenarios using data, maps, and model results n space and time.
- 5. **Application of Remote Sensingand Geospatial Tools**: Understanding and application of RS and GIS concepts and principles in hazard risk and vulnerability mapping and prioritization of areas and risks.
- 6. Use of Statistical and Modeling Techniques and Software's: Application of statistical tools and techniques and software'sfor modeling, analysis, and interpretation of hazard risks and their causes and factors.
- 7. **Field Knowledge and Case Studies:** Conductingfield study tours tovisit the hazardprone and disaster affected areas and understandtheprocesses and identify contributing factors of vulnerability and losses as well as theirspatial and temporal patterns.
- 8. **Applied Dimensions**:Evaluation of the critical hazard risksbased on core knowledge of modern disaster managementand identify the scope of their application in risk reduction and decision making, including resource management, disaster management, land use planning, specific hazard modeling and mitigationtogether with climate change adaptation.
- 9. **Research OriginalityandInnovation**:Application of gainedhazarddisasterknowledgetoidentifyunsolved risk problems and utilize research skills to prepare an acceptable written project document using new tools and methods.
- 10. **Formulation of Public Policy:** Review existing policies of the state, national, and international scales and critically evaluate them for applying in a specific hazard risk reduction at community scale.
- 11. **AnalyticalThinking**: Identify critical and real-time hazard risks, environmental problems and provide philosophical reasoning related to risk reduction, policy, and sustainable development.
- 12. **Communicationand Presentation Skill**:Present and communicatedisaster risk, vulnerability and mitigation conceptsanddatathrough oral, written, and graphical methods.

CourseLevelLearningOutcomeMatrix

CourseLevelLearningOutcomesMatrix-CoreCourses (of Disaster Management
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Programme Specific Outcomes	DM20101CR	DM20102CR	DM20103CR	DM20104CR	DM20201CR	DM20202CR	DM20203CR	DM20204CR	DM20301CR	DM20302CR	DM20303CR	DM20304CR	DM20401CR	DM20402CR	DM20403CR	DM20404CR
Key Subject Concept	\checkmark															
Understanding Geophysical Environments	~			\checkmark				\checkmark		\checkmark	~	✓			~	>
Understanding Multi- and Specific Hazards and Risks	~	\checkmark	~	~	✓			>	~	~	>	✓		~	✓	>
Regional, National and International Scenarios of Hazard Risks					<	<			~	~	~	<	<		<	~
Application of Remote Sensing and Geospatial Tools			✓	✓	✓			✓		~		✓			~	~
Use of Statistical and Modeling Techniques and Software's			~	~	<			~				~			<	~
Field Knowledge and Case Studies	~	~	~		~	~	~	~	~	~	~	~	~	~	~	~
Applied dimensions		\checkmark	✓													
Research Originality and Innovation	~		~	~				✓	~	~	~	✓		~	✓	~
Formulation of Public Policy		\checkmark			\checkmark	\checkmark	\checkmark		\checkmark	✓						
Analytical Thinking		\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			\checkmark	\checkmark
Communication and Presentation Skill	~	\checkmark		~	~	~		~		~	~	~	~		~	~

CourseLevelLearningOutcomesMatrix- Discipline Centric Elective Course

Programme Specific Outcomes	DM20105DCE	DM20106DCE	DM20107DCE	DM20108DCE	DM20205DCE	DM20206DCE	DM20207DCE	DM20208DCE	DM20305DCE	DM20306DCE	DM20307DCE	DM20308DCE	DM20309DCE	DM20405DCE	DM20406DCE	DM20407DCE	DM20408DCE
Key Subject Concept	\checkmark																
Understanding Geophysical Environments	~			~		~	~	~		~	~	~		~		~	
Understanding Multi- and Specific Hazards and Risks	✓	~	~	~		~	~	~	~	✓		✓		~		~	~
Regional, National and International Scenarios of Hazard Risks	~	~	>	~	>	>	~	>		~		~	~	>	~	<	~
Application of Remote Sensing and Geospatial Tools	~		~					~		~		~		~			
Use of Statistical and Modeling Techniques and Software's			~					~		~	~	~		~			
Field Knowledge and Case Studies	~		~			~	~	~		~			~	~		~	
Applied dimensions		<	\checkmark		~	<	\checkmark	~		~	~	~	~	~		✓	<
Research Originality and Innovation	~		~	~	~	~			~		~	~		~			~
Formulation of Public Policy		~	~	~	~	~	~		~	✓		~	~	~	~	~	~
Analytical Thinking	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark		\checkmark
Communication and Presentation Skill		~					~	~	~		~	~		~			

CourseLevelLearningOutcomesMatrix-Generic / Open Elective Course

Programme Specific Outcomes	DM20001GE	DM200010E	DM20002GE	DM200020E	DM20003GE	DM200030E	DM20004GE	DM200040E
Key Subject Concept	\checkmark							
Understanding Geophysical Environments	~	~	~	~				~
Understanding Multi- and Specific Hazards and Risks	~	~	~	~		~		~
Regional, National and International Scenarios of Hazard Risks	<	<		<	<			~
Application of Remote Sensing and Geospatial Tools			~					
Use of Statistical and Modeling Techniques and Software's			~					
Field Knowledge and Case Studies	~		~	~	~	~	~	~
Applied dimensions			\checkmark				\checkmark	
Research Originality and Innovation			~		~			~
Formulation of Public Policy	~		~	~	~	~	~	✓
Analytical Thinking	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark
Communication and Presentation Skill		~	~	~				~