

<b>PROGRAMME : CIVIL ENGINEERING</b> <b>COURSE NAME : DISASTER MANAGEMENT</b> <b>COURSE CODE : TH-4(b)</b> <b>SEMESTER : 6<sup>TH</sup></b> <b>PERIODS/WEEK: 4</b> <b>TOTAL PERIODS: 60</b>		<b>NAME OF THE FACULTY: UTKALIKA PRADHAN</b> <b>SESSION : 2020-2021</b> <b>DATE : 05-04-2021 to 30.06.2021</b>
WEEK	CLASS	TOPICS
1	1	Definition of hazards, disasters, difference between hazard and disaster.
	2	Concept of risk and vulnerability. Risk reduction: preparedness and mitigation.
	3	Disaster management cycle Personal and community awareness
	4	Types of disasters, earthquake, Tsunami, Landslide, cyclone ,flood, drought, forest fire, Chemical and industrial accidents.
2	1	Earthquakes: Definition and concept ,intensity, Richter’s scale.
	2	Earthquake: Elements at risk, Typical Effects
	3	Earthquake: Hazard Zones in India
	4	Main mitigation strategies of Earthquake, safe Engineering practice, Indian Standard code and enforcement Bye-Laws.
3	1	Tsunami: Definition and concept
	2	Tsunami: Onset, Type and Cases. Warning.
	3	Tsunami: Elements at risk. Typical effects, Physical damage, Environmental Damage, Casualties and Public health.
	4	Tsunami: Specific Preparedness: Hazard Mapping, Early warning systems, Community preparedness. Main mitigation strategies: Site planning and land management, Engineering structures. Flood management.
4	1	Landslides: Definition, concept, Onset time and warning.
	2	Landslides: Causes, Elements at risk.
	3	Landslides: Hazard zones and Indian landslides Typical effects: Physical damage, casualties.
	4	Landslides: Main mitigation strategies (Hazard mapping, Landslide practice, retaining walls, Surface drainage control works, Engineering structures). Community based mitigation.
5	1	Cyclones: Definition, concept, Onset type, Warning.
	2	Cyclones: Elements at risk, Typical effects, Indian Hazard Zones.
	3	Cyclones: Main mitigation strategies (Hazard mapping, Land use control, Engineering Structures, Flood management, improving vegetation cover). Community based mitigation.
	4	Floods: Definition, concept, Onset type, Warning.
6	1	Floods: Elements at risk, Hazard zones and Indian floods.
	2	Floods: Typical effects (Physical damage, Casualties and Public health, Crops and flood).
	3	Floods: Main mitigation strategies (Mapping of the flood prone areas, land use control, Flood control and management). Community based mitigation.
	4	Droughts: Definition, concept, Onset type and warning.

<b>7</b>	<b>1</b>	Droughts: Elements at risk, Typical effects.
	<b>2</b>	Droughts: Main mitigation strategies: drought monitoring, water supply augmentation and conservation. Drought Planning.
	<b>3</b>	Forest Fire: Definition and concept, Forest fire damages in India.
	<b>4</b>	Operational fire management systems and organizations. Community involvement.
<b>8</b>	<b>1</b>	Public policies concerning fire. The needs of fire management.
	<b>2</b>	Chemical and Industrial disasters: brief description,
	<b>3</b>	Chemical & Industrial disaster : effects, Preparedness.
	<b>4</b>	Epidemic: Onset type, warning, causes and effects, risk reduction measures
<b>9</b>	<b>1</b>	Heat waves: definition, dangers and effects, Forecasts and warning, awareness.
	<b>2</b>	Policy, Planning and Institutions for disaster mitigation: basics
	<b>3</b>	Role of policy makers in disaster risk reduction
	<b>4</b>	Course for specific action: policy planning
<b>10</b>	<b>1</b>	Institutional arrangement in India: Central level, State Level, District and Block level.
	<b>2</b>	Institutional arrangement in India: Central level, State Level, District and Block level
	<b>3</b>	Major institutions in National level
	<b>4</b>	Major institutions in State level.
<b>11</b>	<b>1</b>	Geospatial Application for Disaster Risk Management at Global and Local level: introduction
	<b>2</b>	Overview of Disaster Risk Management (DRM)
	<b>3</b>	Relevance of geospatial technologies in DRM
	<b>4</b>	Earth observation technologies
<b>12</b>	<b>1</b>	Application of earth observation technologies
	<b>2</b>	Remote sensing
	<b>3</b>	Geospatial intelligence for disaster management
	<b>4</b>	Application of remote sensing in hydro metrological, geological and environmental disaster.
<b>13</b>	<b>1</b>	International systems for disaster risk management: introduction
	<b>2</b>	UN-SPIDER
	<b>3</b>	International Charter for Space and Major Disasters,
	<b>4</b>	Copernicus Emergency Management Service & Sentinel Missions.
<b>14</b>	<b>1</b>	Revision of chapter-1,2
	<b>2</b>	Revision of chapter-3,4
	<b>3</b>	Revision of chapter-5,6
	<b>4</b>	Revision of chapter-7,8
<b>15</b>	<b>1</b>	Revision of chapter-9,10
	<b>2</b>	Revision of chapter-11
	<b>3</b>	Probable Questions discussion
	<b>4</b>	Probable Questions discussion