



Syllabus
for
Skill Enhancement Course
(FYUGP 2nd Semester)
Spring-2026 Onwards

Basket	Course Code	Course Title	Credits	L	T	P	S
Science	DRR100SE	Disaster Risk Reduction and Management: Skills for Safety and Resilience	03	1	0	2	0

Course Objective:

To equip students with the knowledge, skills and competencies to identify, assess, mitigate disasters and design effective disaster management plans and strategies at individual, institutional and community levels, aligning with national and global frameworks.

Course Outcome:

By the end of this course, students will be able to:

- Identify hazards, vulnerabilities and risks at individual, institutional and community levels.
- Outline the legal and institutional frameworks of DRR in India and globally.
- Demonstrate life-saving skills, emergency communication, disaster response and risk mitigation techniques.
- Utilize and implement basic tools and technologies for risk assessment, preparedness and resilience-building.
- Prepare disaster management plans and design community awareness activities, or prototypes in regional/local contexts.

Course Content

Unit-I: Understanding Disaster Risk Reduction and Management (15 Hours)

Basic concepts and terminology; Hazard, Vulnerability, Capacity, Exposure, Disaster, Risk, Disaster Management & Disaster Risk Reduction (DRR).

Hazard profile of J&K, India.

Disaster Management Cycle; mitigation, preparedness, response, relief, recovery, rehabilitation.

Policy and legal frameworks in India. International frameworks. Role of Institutions in DRR (overview only).

Case studies of different disasters in J&K; lessons learned (minimum 2).

Framework for Developing Disaster Management Plans.

Hazard, Vulnerability, Capacity and Risk (HVCR) Assessment tools and techniques; transect walk, hazard mapping, problem tree, chapatti diagram etc.

Mitigation and Preparedness; evacuation planning, mock drills, tabletop exercises, disaster-specific mitigation, crowd management techniques.

Role of emergency forces; NDRF, SDRF, Police, Fire Services, Armed Forces, NCC, NSS.

Emerging technologies; drones, digital literacy, mobile apps (GIRI tool, SAFAR, Meghdoot, UMANG, Sachet, CWC Flood Alerts, IMD, BIS, IHIP), social media for DRR.

Basics of safe construction and structural & non-structural audit exercise (safety of home/ college buildings). Emergency communication network.

Unit-II: Life-Saving Skills (30 Hours)

First aid in disasters; golden hour concept, cardiopulmonary resuscitation (CPR), wounds, choking, burns, fractures, animal bites (snake/dog), heat-related illnesses, triaging, stampede.

Household and personal preparedness and protection; 72-hour emergency kit, safe food storage, water purification, ORS use, water sanitation and hygiene (WASH), and infection prevention

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control (IPC) practices, basic sign language. Search and rescue methods.

Fire safety and electrical/gas/LPG safety; causes, prevention, fire extinguisher demonstration, indigenous methods (Natural first-aid remedies – aloe vera, turmeric, coconut oil, salt solution); traditional risk-reduction practices.

Disaster-specific response; floods, landslides, earthquakes, chemical, biological, radiological, and nuclear (CBRN) emergencies, pandemics, drowning, lightning, gas leakage, cyclone, heatwave, cold wave.

Psychosocial support in DRR; steps for implementing psychological first aid and its importance.

Public health preparedness; public health impacts of various disasters, prevention of post-disaster water-borne and vector-borne diseases.

Unit-III: Field Exposure and Community Engagement

(30 Hours)

Field visits; District emergency operations centre, state disaster response force, fire stations, state emergency operations centre, hazard-prone communities, heat-prone areas (flood-prone village, fire-vulnerable urban slum).

Practical exposure; mock drills, demonstrations and simulations (multi-hazard, evacuation, earthquake, flood), interaction with responders and officials (Aapda Mitras, National Cadet Corps/National Service Scheme/Nehru Yuva Kendra Sangathan, Red Cross).

Community engagement projects; awareness campaigns, DRR clubs (institute and community level clubs), information, education and communication material (podcasts, videos, photo essays, posters, knowledge exchange webinars).

Environmental hazards; youth/community participation (tree plantation, soil conservation).

Project/assignment; preparation of institutional/household DM plan in local language, budget-friendly multi-disaster survival kit prototype, reflective field report, youth-led community engagement projects and creation of IEC/digital communication materials.

Multidisciplinary integration; links with local governments, HEIs, youth/adolescent networks.

Activities for mitigating disaster risks; increasing green cover, plantation and knowledge of human anatomy.

Interaction with; state, district, gram panchayat level officials, DRR helpline numbers, and knowledge of physical resources required and available locally, interviews with disaster survivors.

Suggested Readings:

1. Whitman, M.E., Mattord, H.J., & Green, A. (2013). Principles of Incident Response and Disaster Recovery.
2. FEMA (2013). National Urban Search and Rescue US&R Response System Field Operations Guide. CreateSpace Independent Publishing.
3. Miskel, J.F. (2008). Disaster Response and Homeland Security.
4. Auf der Heide, E. (1989). Disaster Response: Principles of Preparation and Coordination.
5. Basic Search & Rescue Skills. Emergency Response International. www.eri-online.com
6. Fire Safety, Geo Hazards Society. www.geohaz.in
7. Hydro Meteorological Hazards. National Institute of Disaster Management. www.nidm.gov.in
8. Health emergency and disaster risk management framework (Health EDRM), WHO. Link: <https://www.who.int/publications/i/item/9789241516181>
9. Sphere Handbook for humanitarian response standards. Link: <https://spherestandards.org/handbook/>.

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