# PARUL UNIVERSITY - FACULTY OF ENGINEERING & TECHNOLOGY

**Department of Civil Engineering**

**Syllabus for 5th Semester B.Tech Programme**

**Disaster Preparedness & Planning Management (203104346)**

**Type of Course:** B.Tech

**Prerequisite:** Environmental Studies

**Rationale:** This subject is conceptual applications of principles of management to mitigate various disasters.

**Teaching and Examination Scheme:**

| Teaching Scheme (Hrs./Week) | | | Credit | Examination Scheme | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | | | External | | Internal | | | |
| Lect | Tut | Lab | | T | P | T | CE | P | |
| 2 | 0 | 0 | 2 | 60 | 00 | 20 | 20 | 00 | 100 |

**Lect**- Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

**Contents:**

| Sr. | Topic | Weightage | Teaching Hrs. |
|---|---|---|---|
| 1. | **Introduction:** Introduction - Concepts and definitions: disaster, hazard, vulnerability, risks- severity, frequency and details, capacity, impact, prevention, mitigation) | 10% | 03 |
| 2. | **Disasters:** Disasters - Disasters classification; natural disasters (floods, draught, cyclones, volcanoes, earthquakes, tsunami, landslides, coastal erosion, soil erosion, forest fires etc.); manmade disasters (industrial pollution, artificial flooding in urban areas, nuclear radiation, chemical spills, transportation accidents, terrorist strikes, etc.); hazard and vulnerability profile of India, mountain and coastal areas, ecological fragility. | 25% | 07 |
| 3. | **Disaster Impacts:** Disaster impacts (environmental, physical, social, ecological, economic, political, etc.); health, psycho-social issues; demographic aspects (gender, age, special needs); hazard locations; global and nationa disaster trends; climate change and urban disasters. | 25% | 08 |
| 4. | **Disaster Management Cycle and Framework:** Disaster Risk Reduction (DRR) - Disaster management cycle – its phases; prevention, mitigation, preparedness, relief and recovery; structural and non-structural measures; risk analysis, vulnerability and capacity assessment; early warning systems, Post-disaster environmental response (water, sanitation, food safety, waste management, disease control, security, communications); Roles and responsibilities of government, community, local institutions, NGOs and other stakeholders; Policies and legislation for disaster risk reduction, DRR programmes in India and the activities of National Disaster Management Authority. | 25% | 08 |
| 5. | **Disasters, Environment and Development:** Factors affecting vulnerability such as impact of developmental projects and environmental modifications (including of dams, land-use changes, urbanization etc.), sustainable and environmental friendly recovery; reconstruction and development methods. | 15% | 04 |

***Continuous Evaluation:**

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

**Text/Reference Books:**

1. http://ndma.gov.in/ (Home page of National Disaster Management Authority)
2. http://www.ndmindia.nic.in/ (National Disaster management in India, Ministry of Home Affairs)
3. Pradeep Sahni, 2004, Disaster Risk Reduction in South Asia, Prentice Hall.
4. Singh B.K., 2008, Handbook of Disaster Management: Techniques & Guidelines, Rajat Publication.
5. Ghosh G.K., 2006, Disaster Management, APH Publishing Corporation
6. Disaster Medical Systems Guidelines. Emergency Medical Services Authority, State of California, EMSA no.214, June 2003
7. Inter Agency Standing Committee (IASC) (Feb. 2007).IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC

**Course Outcome:**

After Learning the course the students shall be able to:

1. Understand the application of Disaster Concepts to Management.
2. Analyze Relationship between Development and Disasters.
3. Apprehend categories of Disasters and
4. Realize the responsibilities of society towards Disaster Management.