Indian Red Cross Society

POSTGRADUATE DIPLOMA COURSE IN DISASTER PREPAREDNESS & REHABILITATION
(Affiliated to Guru Gobind Singh Indraprastha University, Delhi-110006)

PROPOSED SYLLABUS
2017 Onwards

Indian Red Cross Society
National Headquarters, 1, Red Cross Road,
New Delhi 110001, INDIA
Indian Red Cross Society

Apart from promoting humanitarian principles and values, the Indian Red Cross Society is actively involved in disaster relief, disaster preparedness and health care in the community. The IRCS is a national federation of 700 branches spread all over country and is one of the largest national societies in the world.

Established in 1920 by an Act of Parliament, the Indian Red Cross Society has wide and varied experience in disaster relief work ranging from 1934 Bihar earthquake to 1999 super cyclone in Orissa, 2001 Gujarat earthquake and 2004 Tsunami in the coastal areas in Andhra Pradesh, Tamil-Nadu, Kerala and J&K earthquake in 2005. It's inside network of 700 branches having 12 million members and voluntary workers available all over India.

The IRCS has close links with the Federation of Red Cross and Red Crescent Societies and the International Committee of the Red Cross (ICRC). These are non political humanitarian organizations having wide exposure and experience in the related fields. It has also established good working relationships with other National Red Cross and Red Crescent Societies. The IRCS benefits immensely from these organisations technically, financially and intellectually in times of needs and for the purposes of capacity building.

Disaster Management Centre (DMC):

The IRCS has developed a Disaster Management Centre at the National Headquarters which is retrofitted. This serves as a base for all disaster related activities. The centre is designed to strive for improved overall disaster management planning and response, as also for long term risk reduction activities. It has facilities to link with all state branches and warehouses to provide efficient response, better coordination and monitoring. It serves as an information and knowledge
Central Training Institute (CTI): The IRCS has established a State of art Central Training Institute (CTI) at Bahadurgarh on the fringes of Delhi. It is spread over an area of 5 acres and has all the modern facilities of a training Institute. It contains equipments that are needed by a Disaster Response Unit (DRU) for providing hands on training, water pool for training rescue operations and state of art training facilities for in house training and outdoor drills.

India is one of the most disaster prone countries and it has witnessed several disasters. This has prompted the Red Cross to devote more attention to disaster preparedness activities. There is an acute shortage of trained manpower in this important sphere of speciality. The IRCS has taken up the major task of training a cadre of qualified trainers who would be academically and practically trained. It is introducing a one year part time course on Disaster Preparedness and Rehabilitation at its National Headquarters with its affiliation to the GGSIP University.

Objectives:

- To provide experienced practitioners in appropriate field.
- To enhance career opportunities while in service, through a period of academic study without disrupting the service.
- To provide opportunities to professionals to obtain specialised qualification which has recognition in global perspective.
- To provide capacity building for national, state or institutional level in disaster preparedness and rehabilitation.
- To provide platform to professionals to build up capacity for training for trainers.
- To develop liaison with Government, NGO, Corporate Sector and International Agencies for synergies in disaster mitigation, preparedness and rehabilitation.
Module 1

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<tr>
<th>Code No.</th>
<th>Topic</th>
<th>Credits</th>
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<tr>
<td>DP&amp;R 101</td>
<td>Introduction to Dimensions of Natural And Manmade Disasters.</td>
<td>4</td>
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<tr>
<td>DP&amp;R 102</td>
<td>Policy and Legal Framework, and International Humanitarian Law</td>
<td>2</td>
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<td>DP&amp;R 103</td>
<td>Agencies Dealing in Disasters and Role of Funding Agencies</td>
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<td>DP&amp;R 104</td>
<td>Risk Assessment, reconstruction and Rehabilitation in disasters.</td>
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<td>DP&amp;R 105*</td>
<td>*Incident Command system</td>
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<td>DP &amp; R 106*</td>
<td>*Project Work/Assignment</td>
<td>3</td>
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<td>Total Credits</td>
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*Non university Examination System (NUES)*
101. *Introduction to Dimensions of Natural and Manmade Disasters*

**Objectives:** The course is intended to provide a general insight in the dimensions of disasters caused by nature beyond the human control as well as the disasters and environmental hazards induced by human developmental activities.

**Expected outcome:** To understand about natural & manmade disasters, its hazards, prediction, mitigation, preparedness and rehabilitation.

**Course curriculum:**
- Disaster: Definition, Meaning, Factor and Significance
- Understanding Disasters: Causes and Effects
- Disasters: a Global View
- Disaster Profile of India: Regional and Seasonal

**Unit - 101.1**

- Disaster: Definition, Meaning, Factor and Significance with focus on DM Cycle
- Difference between hazard and disaster
- Natural and Manmade Disasters
- Nature of disasters,
- Causes and effects of Disasters
- Significance and repercussions (Global and regional Trends)

**Unit 101.2**

- Structure of the earth - Primary differentiation and formation of core, mantle, crust.
- Structure of Atmosphere- Pressure, temperature, precipitation, Cloud classification and formation; and environmental implications.
- Climate change-Emissions and Global warming, impact on sea level in south Asian region
- Environmental disruptions and their implications. COPs and Paris agreement
Types of Disasters

Floods – a) Flood plains, drainage basins, nature and frequency of flooding, flood hazards, urbanization and flooding, flood hydrographs,
b) Dams barrages and river diversions, creation of reservoir
c) Influence on micro-climate, impact on flora and fauna, Urban Heat Island Phenomena

Land slides – Landslide analysis, determination of stability and safety factor.

Coastal hazards – Tropical cyclone (Causes, impact, monitoring), coastal erosion, sea level changes and its impact on coastal areas and coastal zone management.

Earth quakes – Preliminary concepts, seismic waves, travel-time and location of epicenter, nature of destruction, a seismic designing, quake resistant buildings and dams-

Tsunamis – causes and location of tsunamis; disturbance in sea floor and release of energy, travel time and impact on fragile coastal environment

Volcanoes- Causes of volcanism, volcanic materials, geographic distribution of volcanoes, Avalanches and tornadoes.

Oil spills- Identification and monitoring, impact on flora and fauna

Droughts and Deserts- Definition, causes, effect, monitoring and management

Unit 101.4- Industrial and Technological disasters, including Fire and Accidents.

Unit 101.5- CBRN, Warfare insurgency

Unit 101.6- Sector wise disaster preparedness and response eg. water supply, electricity, infrastructure, health and communication etc.

Module 1

Course Code-DP&R-102

Unit Code-102.1to 102.5

102. Policy, Legal Framework and International Humanitarian Law

Objectives:

(i) To understand the various aspects and policies of national disaster management
policy. Laws and regulations.

To give an overall view of rules of war, protection in war, assistance for conflict victims, preventive actions, restoring family reunion after disasters, family news service.

**Expected outcome:** Expected to know and appreciate the importance of disaster management policy and overall view of rules of war and protection in war and assistance for conflict victims. Restoring family services.

**Course Curriculum:**

**Unit-102.1:** Policies in Disasters - its significance, approaches, essential components, Formulations and coordination. Latest Frameworks like Sendai Framework for DRR


**Unit-102.3:** Red Cross and Red Crescent global Movement and organisations involved in movement like ICRC, IFRC and Partner National Societies

**Unit-102.4:** International Humanitarian law & International Human right Law

**Unit-102.5:** Protection of civilian community focusing child rights, inclusion of People with disability, gender balance, detainees and restoring family links after any Disaster. Mutual support (Safer access to Volunteers) and working with different organizations

**Module-I**  
**Credits-2**  
**Course Code DP&R-103**

**Unit Code-103.1&103.6**

*103. Agencies Dealing in Disaster and role of Funding Agencies.*

**Objective:**

(i) To enable the students learn and understand the basic concepts and, Financing and Insurance and applying them in Disasters.

(ii) To know different national, international and local agencies involved in disasters and
specific mandate with emphasis on their operations in situation of disaster.

**Expected Outcome:**

(i) In the context of disasters the student will be able to understand basic aspects of Finance and Insurance.

(ii) Familiarized with the different national and international agencies for coordination and management during disaster

**Course Curriculum:**

UNIT-103.1:- Public budgeting and finance systems; state and local finances, Crisis Relief Fund, NCCF, National Mitigation Fund.

UNIT 103.2:- Property loss exposures; life, health and loss of Income exposures, insurance principles and policy provisions; Insurance Industry and regulatory frame work

UNIT-103.3:- National Agencies - National Disaster Management Cell, National Disaster Management Authority (NDMA), NCMC, National Institute Of Disaster Management. Role of various departments and agencies: Indian Red Cross Society, Planning Commission, National Civil Defense Organization, Bharat Scouts and Guides, Military and Para-Military Forces; Corporate Bodies etc.

UNIT-103.4:- State and District Level Agencies, State Disaster Management Authority (SDMA), District Disaster Management Authority (DDMA).Disaster Management cells at state level and District level: District Magistrate office, Role and Responsibilities of DM in prevention, preparedness, mitigation, relief and rehabilitation; local bodies and role of different functionaries - Role of PRI / Municipalities.


UNIT-103.6:- Civil Society Agencies: NGOs, Religious and Cultural Organizations,
Community based organizations, political parties and their affiliates, philanthropic organizations. Recent case studies on the role played by various civil society organizations during disasters.
104 Risk Assessment, Reconstruction and Rehabilitation, in Disasters.
Disposal of Debris and Human Remains after disasters.

Objectives:

(i) The Course will provide the methods for undertaking the risk assessment and would introduce the techniques for understanding and assessing the hazards. It would give an insight into the concept of vulnerability factor, industrial hazard and operability study.

(ii) To understand the challenges and issues which may be encountered in post event / recovery/ rehabilitation, and will offer a number of strategies which can be used to resolve them successfully.

(iii) To facilitate and coordinate the disposal of debris and human remains produced by disaster in a systematic, coordinated manner without producing any threat to the health, safety, and welfare of the affected citizens.

Course Curriculum:-

(i) Information Concept ; Meaning types and importance Risk and Vulnerability Analysis, Risk reduction and Community Preparedness.

(ii) Basic concepts Rehabilitation Social and Economic Aspects Reconstruction and Rehabilitation as Development and agriculture and irrigation Housing , Retrofitting repairing strengthen. Disasters, types of debris, Organisation and concept of operations, staff development and responsibilities, debris removal priorities, estimates of debris, management actions.

Expected outcome:
Able to understand different aspects of rehabilitation and its significance . Able to coordinate and assist in disposing of all kinds of debris

UNIT-104.1
Introduction to risk analysis, Definition, methodology, characteristics; Definition of risk and fundamentals of risk analysis, environmental hazards, exposure and risk assessment, risk reduction. Basic methodology in risk assessment, hazard
identification, dose response assessment, exposure assessment, and risk categorization.

UNIT-104.2

The assessment for different types of Disaster, the extreme event analysis hazard ecology, chemical load and environmental health risk, carcinogenic materials and environment, impact on immune reproduction and nerves system, risk assessment.

UNIT-104.3

Risk Reduction - Design of Risk management program, concept of vulnerability and analysis, exposure, preparedness, prevention and response analysis.

UNIT-104.4

Vital needs, - Need Assessment and logistic planning for food, water supply, sanitation including debris management, shelter - temporary and semi-permanent.

UNIT-104.5

Essential Services - Medical care, Education, Psychosocial, Reproductive and children health care, Law and order.

UNIT-104.6

Livelihood – Skill Enhancement, livelihood development programme,

UNIT-104.7

Infrastructure reconstruction – Damage Assessment, Reconstruction of Immediate nature, Long term reconstruction. (Repair and retrofitting: Superficial repair, structural repair, structural strengthening of habitable spaces, public buildings, roads, bridges, dams, culverts etc.)

UNIT 104.8

Debris clearance – damage to buildings, and clearance.

UNIT 104.9

Disposal Of Dead Humans.

UNIT 104.10

Disposal Of Dead animals.
Module-1

Course Code DP&R-105
Unit Code-105.1 to 105.2

105 Incident Command System*

Objective: To understand the importance of the ICS in terms of a set of personnel, policies, procedures, facilities, and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities of situations.

Expected outcome: The student should know the ICS to be followed in case of disasters of various natures

Course curriculum:

Unit-105-1

- Defining the system and criteria reason for having an ICS, defines criteria,
- System characteristics, common terminology used resource elements for particular disciplines,
- Facilities and its defined functions,
- Standard organisational positions,
- Integrated communications,
- Comprehensive resource utilisation,
- Command responsibilities, operation system responsibilities,

Unit-105-2

- Planning-staff positions, logistics, finance
- Incident action planning process
- Forms used in the process
- Organisation assessment list, division assignment
- Communication, Communication plan, support vehicle inventory, air operation,
- Medical plan, organisation chart, incident status summary,
- Check in list, unit log, operational planning, work sheet,
How to integrate with volunteers without interfering the working programme.

Non university Exam System
Module-1

Course Code DP&R-106

Unit Code-106

Unit-106 Project Work & Assignment*

*Non university Exam System
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<th>Code No.</th>
<th>TOPICS</th>
<th>Credits</th>
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<tr>
<td>DP&amp;R 107</td>
<td>Informatics and communication System in Disaster Preparedness and Response</td>
<td>3</td>
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<tr>
<td>DP&amp;R 108</td>
<td>Geo-informatics for Disaster preparedness and rehabilitation.</td>
<td>3</td>
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<tr>
<td>DP&amp;R 109</td>
<td>Reporting information and Documentation in Disasters *</td>
<td>1</td>
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<tr>
<td>DP&amp;R 110</td>
<td>Management issues in Disaster Preparedness and Response.*</td>
<td>2</td>
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<td>DP&amp;R 111</td>
<td>Health and consequences of disaster and its preparedness and planning.</td>
<td>3</td>
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<tr>
<td>DP&amp;R 112</td>
<td>Psycho-Social and Mental Health support</td>
<td>1</td>
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<tr>
<td>DP&amp;R 113</td>
<td>Rehabilitation *</td>
<td>1</td>
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<tr>
<td>DP&amp;R 114</td>
<td>Project work (minor)*</td>
<td>4</td>
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*Non University examination System (NUES)
107. Informatics and Communication System in Disaster Preparedness and Response

Objectives:
(i) To give knowledge about the fundamentals of computers, data storage, data presentation and introduction to programming etc. Also to cover the needs, usage and implementation of disaster information network.
(ii) To impart knowledge in the field of communication systems applicable to disaster mitigation and rehabilitation. The focus will be from basic orientation to applied know-how. Practical and case studies will also be covered.

Expected outcome:
To know the meaning and importance of information especially in the context of disasters. Understands different types of information; learn the various methods of collecting and organizing relevant information; effective dissemination; and using the information technology appropriately.

A. Informatics

UNIT 107.1
Information concept: Use of MS-Office Package, MS Word (with demo of use), MS Excel, PowerPoint, MS Access, Internet, Email, Networking, Practical problem solving Exercise involving software packages like importing, exporting and running videos, documents etc.

UNIT 107.2
Importance of Information in Disasters; methods of collecting relevant information - libraries, internet, interviews questionnaires, survey, observation, Mass media, Meetings, Role of Information from disaster affected community. Disaster Management Apps

UNIT 107.3
Role of information technology in Disasters. Disaster management Information System. Organizing and effective dissemination of information: feedback for improving information
UNIT-107.4

UNIT-107.5
Cellular technologies including Mobile SMS

UNIT-107.6
Early warning systems, technologies and Innovations.

UNIT 107.7
National Communication Plan

UNIT 107.8
Emergency operation Centers

C. Cyber Threats

UNIT 107.9 Cyber Terrorism & Countermeasures