Vidyasagar University
Curriculum for B. Sc (General) in Disaster Management

[Choice Based Credit System]

Semester-III

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
DSC-1C		**DSC1CT:** Disaster mitigation, Prevention and Preparedness, Response and Rehabilitation	Core Course	4	0	0	6	75
		Practical		0	0	4		
DSC-2C	**TBD**	**DSC-2C (other Discipline)**	Core Course				6	75
DSC-3C	**TBD**	**DSC-3C (other Discipline)**	Core Course				6	75
SEC-1		**TBD**	Skill Enhancement Course-1				1-0-2/ 1-1-0	50
Semester Total							**20**	**275**

L = Lecture, **T** = Tutorial, **P** = Practical, **CC** = Core Course, **TBD** = To be decided, **SEC** = Skill Enhancement Course.

DSC-1 = Discipline Specific Core of Subject-1, **DSC-2** = Discipline Specific Core of Subject-2,

DSC-3 = Discipline Specific Core of Subject-3.

Semester-III

Core Course (CC)

DSC-1C (CC-3): Disaster mitigation, Prevention and Preparedness, Response and Rehabilitation   Credits 06

DSC1CT: Disaster mitigation, Prevention and Preparedness, Response and Rehabilitation

Credits 04

Course Contents:

1. Disaster mitigation

Disaster mitigation: meaning, concepts and strategies of disaster mitigation. Emerging trends in disaster mitigation.

Institutionalization of Disaster Mitigation: Role of team co-ordination and emergency co-ordination agencies.

Types of Mitigation: Structural and non structural mitigation. Community basis mitigation.

Disaster mitigation - Role of information and communication, team, leadership and co-ordination: disaster communication, disaster leadership, programs of disaster mitigation in India. Sustainable development for disaster mitigation. Mitigation management.

2. Disaster Preparedness

Disaster preparedness: introduction, three A's - aim, action, accountability. Concepts and nature. Principles of Disaster preparedness. Steps of Disaster preparedness. organisational structure for Disaster preparedness. Disaster preparedness plan. Contingency planning. training and human Resources Plan. Emergency operational plan. Disaster preparedness of peoples with special needs/ vulnerable groups . Disaster preparedness with relevance to housing, infrastructure and live stock. Community based disaster preparedness planning. Role and responsibilities of different international agencies , NGO's, community based organization, community and media , Government in disaster preparedness; Role and responsibilities of educational institution, local, district and state administration, armed forces, paramilitary forces, police , national service scheme, scouts in disaster preparedness.

Disaster preparedness programmes : Earthquake and cyclone disaster preparedness. Early warning systems. Floods and draught disaster preparedness programme.

Information technology: Role in disaster preparedness with special reference to Geographical Information System. Use and application of emerging technologies in disaster preparedness.

News Media: News media for Governmental and community preparedness.

Emerging Technologies in Disaster Management: Remote sensing, Disaster Mapping, Aerial Photography, land use zoning, Wireless and Radio, HAM Radio.

Disaster prevention: Concepts and elements, public awareness. Role of education and trainings in disaster prevention.

3. Disaster response

Disaster response: Plan, needs and damage assessment. Logistic management. Disaster response - central, State, District, and local administration. Disaster response - armed forces, police and other forces. Training on Skill Development in disaster responses force and team. Psychological response - Trauma and Stress management- Rumour and Panic management. Relief : Minimum standard relief. Managing relief. Funding relief.

Response to disasters: Aims of response. Control process and measurements. Evacuation and migration. Administering First aids. Injured to Hospital. Mobilisation and restoration of essential services. Modern and traditional methods of response. Ideal command centre. Rescue.

Indigenous knowledge and community based disaster management; Do's and Don'ts during and Post Disasters.

Management Strategies for Biological Disasters: Plague, Snake bites, Tarantula bites, Malaria, Dengue etc.

4. Disaster Rehabilitation, Reconstruction and Recovery:

Reconstruction and Rehabilitation as a meant for development. Agencies in disaster management. Damage assessment. Funding arrangement. Medium and long term recovery. community participation. Identifying and ascertaining the impact of disaster.

Participative rehabilitation: Physical and social infrastructure. Social and economic rehabilitation: capacity building for reconstruction and rehabilitation. Recovery and rebuilding works. counseling and psychological supports for recovery. Education and awareness on disaster recovery. Role of information dissemination. Monitoring and evaluation of rehabilitation work. Constraints in Monitoring and evaluation.

Recovery: Concept of recovery, livelihood and approach to reconstruction, Livelihood restoration, Speedy recovery, Linking Recovery with safe development, Creation of Long-term job opportunities. Long term recovery. Long term counter disaster planning.

DSC1CP: Practical   **Credits 02**

Practical:

1. Identification of Rocks: Igneous, Metamorphic and Sedimentary Rocks

2. Analysis of Sediments: Sediment Analysis estimation of sand, silt and clay percentage in the sediments. . Identification of size and shape of the sediments. Separation of heavy minerals from the sediments.

3. Information Technology: Basic concepts on computer software, hardware, database, internet, website, OS, programming language.

4. Fire Fighting: Chemistry of combustion/ Fire. Types of fire and methods of extinguishing. Types of extinguishers and its maintenance.

5. Photography in Disaster management: Study of elements of aerial photographs. Litho logical and structural interpretation using aerial photographs. Drainage pattern interpretation using aerial photographs. Digital image processing, image enhancement, image manipulation. Hazard   identification using digital images.

6. Field reports:

> **a.** Students will be asked to submit a field reports based on visit any establishment related to disaster management.

> **b.** Students will be asked to submit a report of Field work / Case studies on : Hazard mapping of vulnerable areas, Vulnerability assessment *(physical, social, organizational, economical, technological)***,** Risk mitigation planning for vulnerable areas.

7. Laboratory Note Book

Students will be required to maintain records of all works done in connection with the topics taught in this paper.

<center>*Skill Enhancement Course (SEC)*</center>

SEC-1: Media, Reporting and Documentation in Disasters   **Credits 02**

SEC1T: Media, Reporting and Documentation in Disasters   **Credit 01**

Course Contents:

Unit-I: Media

1. Types of Media.
2. Importance of role of media – informative, suggestive and analytical.
3. Role of Media in Disaster Mitigation. Impact of media on policy.
4. News media in disaster management: Types of news media, structure and trends. News media during crisis.

Unit-II: Reporting

1. Factual and Ethical Reporting.
2. Impact of Media Coverage and Public Communication and Handling of Media.
3. Media reports: Governmental and community preparedness.

Unit-III: Documentation
1. Principles of Report Writing and Guidelines according to style manuals
2. Writing and Presentation of Preliminary, Main body and Reference section of Report, Evaluation of Research Report

SEC1P: Practical   **Credit 01**

Project Report

Submit a project report on any topic relevant to either Natural Disaster or Man-Made Disaster.

Or

SEC-1: Disasters and Human Behaviour   Credits 02

SEC1T: Disasters and Human Behaviour

Course Contents:

Unit-1: Individual Dimensions of Organizational Behaviour

Nature of Human Behaviour- Concept, Process, Managerial Implications, Individual differences, Perception- Meaning, Perceptual Process, Perceptual Organization, Interpersonal Perception. Attitudes and Values - Formation, Theories of attitude formation, attitude change, Values. Motivation- Motivation and behaviour, Motivation and performance, Theories of motivation.

Unit- 2: Group Dimensions of Organizational Behaviour

A. Group Dynamics- Formal and Informal Groups, Group Behaviour, Group Decision Making Team dynamics- Types of Teams, Effective Team, Team Creation, Task force, Quality Circle Leadership - Concept, Leadership Styles, Leadership development, leadership & technology.

B. Conflict-Levels of Conflict, Process, Conflict Management, Negotiation, Grievance management. Stress- Concept, Sources of stress, Stress Management, Stress and Performance Change- Levels of change, Types of change, Change process, Change management.

Unit -3: Training and Development

Meaning, Objectives, Training process, Training needs analysis, Training Techniques and Methods, Evaluation, Training Budget, Training outsourcing, E-training, Emerging Trends in Training, Counseling.

Unit- 4: Cases of managing human behaviour in disaster management

1. Indian cases in natural disasters and man-made disasters.
2. Global cases in natural disasters and man-made disasters.

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Or

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SEC-1: Disasters and Stress Management   Credits 02

SEC1T: Disasters and Stress Management
Course Contents:

Unit- I

Understanding Stress - Meaning – Symptoms – Works Related Stress – Individual Stress – Reducing Stress – Burnout.

Unit- II

Common Stress factors time & career plateauing – Time Management – Techniques – Importance of planning the day – Time management schedule – Developing concentration – Organizing the Work Area – Prioritizing – Beginning at the start – Techniques for conquering procrastination – Sensible delegation – Taking the right breaks – Learning to say 'No'.

Unit- III

Crisis Management - Implications – People issues – Environmental issues – Psychological fall outs – Learning to keep calm – Preventing interruptions – Controlling crisis – Importance of good communication – Taking advantage of crisis – Pushing new ideas – Empowerment.

Unit- IV

Work Place Humour - Developing a sense of Humour – Learning to laugh – Role of group cohesion and team spirit – Using humour at work – Reducing conflicts with humour.

Unit- V

Self Development - Improving personality – Leading with integrity – Enhancing creativity – Effective decision making – Sensible communication – The Listening Game – Managing Self – Meditation for peace – Yoga for Life. Capacity Development, sharing experiences of the hazards and Disasters.