#### UNIVERSITY OF MUMBAI No.UG / 467

CIRCULAR:-

The Convener for the Centre of Disaster Management and the Principals of the affiliated colleges in Arts, Science and Commerce are hereby informed that the recommendation made by the Centre of Disaster Management has been accepted by the Academic Council at its meeting held on 10th August, 2007 <u>ride</u> Item No.7.4 and subsequently approved by the Management Council at its meeting held on 16th August, 2007 vide Item No.53 and that in accordance therewith, (1) Certificate Course in Crucial Issues in Disaster Management, (2) Certificate Course in Environment Management and Disaster Mitigation and (3) Certificate Course in Disaster Counseling have been introduced by the University from the academic year 2007-2008 and that same have been conducted by the Centre of Disaster Management.

Further that in exercise of the powers conferred upon the Management Council under Section 54(1) and Section 55(1) of the Maharashtra Universities Act 1994, i Ordinances 5724,5725,5726,5728 and 5729 and Regulations 5773, 5774, 5775, 5776, 5777, 5778, 5779, 5780, 5781,5782,5783, 5784, 5786, 5787, 5788, 5789, 5790 and 5791 including syllabi relating to the (1) Certificate Course in Crucial Issues in Disaster Management, (2) Certificate Course in Environment Management and Disaster Mitigation and (3) Certificate Course in Disaster Counseling are as per Appendix and that the same have been brought into force with effect from the academic year 2007-2008.

MUMBAI-400 032

20th November, 2007

To.

The Convener for the Centre of Disaster Management, and the Principals of the affiliated colleges in Arts, Science and Commerce

A.C./7.4/10.08.2007 M.C./53/16.08.2007

MUMBAI-400 032 of 2007, No.UG 467 A

20th November, 2007

Copy forwarded with compliments for information to :-

1) The Deans of the Faculties of Arts, Science and Commerce

2) The Officer on Special Duty and Controller of Examinations,

3) The Co-Ordinator of the University Computerization Centre

for I/c, REG

The Director, Board of College and University Development, , the Deputy Registrar (Eligibility and Migration Section), the Director of Students Welfare, the Executive Secretary to the Vice-Chancellor, the Pro-Vice-Chancellor, the Registrar and the Assistant Registrar, Administrative sub-center, Ratnagiri for information .

The Officer on Special Duty and Controller of Examinations (10 copies), the Finance and Accounts Officer (2 copies Record Section (5 copies ), Publications Section (5 copies), the Deputy Registrar, Enrolment, Eligibility and Migration Section (3 copies ), the Deputy Registrar, \$tatistical Unit (2 copies), the Deputy Registrar (Accounts Section), Vidyanagari (2 copies ), the Deputy Registrar, Affiliation Section (2 copies ), the Director, Institute of Distance Education, (10 copies) the Director University Computer Center (IDE Building), Vidyanagari, (2 copies) the Deputy Registrar (Special Cell), the Deputy Registrar, (PRO). the Assistant Registrar, Academic Authorities Unit (2 sopies ) and the Assistant Registrar, Executive Authorities Unit (2 copies ). They are requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to in the above Circular and that 10 separate Action Taken Report will be sent in this connection, the Assistant Registrar Constituent Colleges Unit (2) copies ), BUCT(1 copy), the Deputy Account, Unit V(1 copy ), the In-charge Director, Centralize Computing Facility copy), the Receptionist (1 copy), the Telephone Operator (1 copy), the Secretary MUASA (1 copy)

Superintendent, Post-Graduate Section (2 copies), the Superintendent, Thesis Section (2 copies)

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Enclosure to Item No. 7.4 10<sup>th</sup> August, 2007.

# UNIVERSITY OF MUMBA!



# Syllabus for the Certificate Courses for the Centre for Disaster Management

- 1. Certificate Course in Crucial Issues in Disaster Management
- 2. Certificate Course in Environment Management and Disaster Mitigation
- 3. Certificate Course in Disaster Counseling.

(With effect from the academic year 2007-2008)

### Certificate course in Crucial Issues in Disaster Management

preamble: This course is designed to become one of the basic courses for Post Graduate Diploma Course in Disaster Management to be introduced in 2008-09. It aims to give understanding on important concepts and issues in disaster management. A student would get a working knowledge of the crucial issues involved in disaster prevention, mitigation and response. The course does not try to go into details of these themes, its objective is to make the student aware of the main issues. Detailed understanding of the issues involved in disaster management discussed in this course can be developed by taking other certificate courses of the Centre dealing with these issues.

### Ordinances and Regulations for the Certificate Course in Crucial Issues in Disaster Management

0. 5724: A candidate for being eligible for admission to the Certificate course in Crucial Issues in Disaster Management must have passed Bachelors degree examination in any branch of the University of Mumbai or an equivalent examination of another University of India/Abroad recognized by this University as equivalent thereto. The candidate must have passed the bachelors degree with at least 45% marks.

0 5725: Admission for the Certificate course will be open to the students from foreign countries on recommendation by the Ministry of Education and Cultural Affairs, Government of India and through proper channel. However their application will be considered subject to minimum qualifications to their eligibility of admission.

R 5773: The duration of the Certificate course in Crucial Issues in Disaster Management shall be three months.

R 5774: The number of lectures for the Certificate course will be four hours per week.

R.5775: Intake capacity of the course will be 30.

R 5776: The examination of the Certificate Course will be held in TWO parts - A mid term exam in the sixth week (with 40% weightage) and another at the end of the course (with 60% weightage).

R 5777: Passing of the mid term exam will not be a requirement for appearing for the end of the course exam.



R 5778: To pass the Certificate Course in Crucial Issues in Disaster Management, the R Solidate must obtain a minimum of 50 percent marks overall (in mid term and end term examination taken together).

50% or more Less than 50%

Satisfactorily passed

Fail

The fees for the course is proposed to be Rs. 1,500 per student. With the capacity of 30 students, that comes to Rs. 45,000. The expenses are estimated to be Rs. 43,000 directly for the course and Rs. 2,000 is kept as sinking fund for collective expenses for the Centre, like brochure printing, advertising, seminars, etc.

Syllabus for the Certificate Course in Crucial Issues in Disaster Management

### Unit 1. Disasters: Definition, causation, classification and categorization (2 lectures)

- Definition of disasters
- Causation of disasters
- Classification of disasters
- Dimensions of disasters
- Trends in natural disasters and implications
- Disaster trends with respect to industrial and chemical accidents
- Case studies

### Unit 2. Principles of Disaster Management (2 lectures)

- Multi hazard approach to disasters
- Sustainable and continuous approach
- Capacity building
- Autonomy and equity
- Financial sustainability
- Incorporating aspirations of people and local conditions

#### Unit 3. Disaster preparedness (4 lectures)

- Forecasting and warning
- Local warning systems
- Construction of shelters and evacuation sites
- Evacuation management plan
- Planning for evacuee support

### Unit 4. Risk assessment, risk management and reduction (6 lectures)

- . Main sources of risk
- . Challenges and opportunities facing risk reduction
- · Uncertainties in hazard assessment
- · Loss parameters for risk analysis
- · Techniques of risk assessment
- Role of financing in effective risk management

### Unit 5. Assessment of disaster vulnerability of vulnerable groups (8 lectures)

- What are risk and vulnerability assessments
- Nature of vulnerabilities: Not just structural analysis
- Infrastructure analysis
- Societal analysis
- · Environmental analysis
- Economic analysis (livelihood issues)
- Measures of vulnerabilities
- Social adaptation and ameliorating vulnerabilities

Mid term exam: 2 hours

#### Unit 6. Building community resilience (4 lectures)

- · Responses to risk by households and communities
- Societal risk management
- Harnessing local capacities
- Building community resilience
- Helping the poor in managing risk
- Case studies from countries

#### Unit 7. Disaster response (4 lectures)

- Rescue and relief phase
- Relief phase
- Needs/damage assessment
- Relief and rehabilitation phase
- Involvement of local communities
- Rehabilitation and reconstruction phase

### Unit 8. Ethics in Aid (4 lectures)

- Humanitarian ethics in disasters
- The Sphere standards
- Assessing the impact of humanitarian aid
- Disasters and refugees

# Unit 9. Integrating disaster management and development (6 lectures)

- Disasters can be a result of failed development
- Development programs can increase/decrease vulnerability
- Cost-benefit analysis of investing in vulnerability reduction
- Disaster risks and millennium development goals
- Disasters as opportunities for development initiatives
- Incorporating disaster risk in development planning

### Unit 10. Role of Information and Communication in disasters (2 lectures)

- Role of information
- Role of early warning systems and disaster preparedness
- Sharing information in disaster response
- Communication and disaster response
- Media coverage of disasters

### Unit 11. Disaster management in India and world (4 lectures)

- International Strategy for Disaster Reduction (ISDR)
- Early warning and ISDR
- International Federation overview of Disaster Response Law
- Earthquake disaster management in China
- Japan's disaster management system
- India's high powered committee for preparation of disaster management plan, 2000
- Administrative set up for disaster management in India
- State's involvement and model state disaster management acts
- Role of self government

End of term exam: 2 hours

### References

American Red Cross. Disaster preparedness kit. (www.redcross.org/services/disaster) (Unit

Dave Dyjack (2007). Disaster Response through the lens of an Environmental Health professional (idready.org/webcast) (Unit 2)

FSCAP (1990). Forecasting, preparedness and other operational measures for water related natural disaster reduction in Asia and Pacific. ESCAP, Thailand.. Chapter III. (Unit 3)

Gujarat State Disaster Management Authority (2002). Gujarat State Disaster Management Policy. (Unit 2)

M. Munasinghe and C. Clarke (1995). Disaster Prevention for Sustainable Development. Published by IBNDR and World Bank. (Chapter 3) (Unit 5)

Mark Pelling (2003). The vulnerability of cities: Natural Disasters and Social Resilience. Earthscan Publishers, London. (Unit 6)

Nascem Ahmed (2003). Managing disasters. Kilasor Books, New Delhi. (Unit 1, 4 and 11)

Prabhas Chandra Sinha (2006). Disaster Management process. Law, Policy and Strategy. SBS, Publishers and Distributors Pvt Ltd. (Unit 11)

Prabhas Chandra Sinha (2006). Disaster vulnerabilities and risks. SBS Publsihers and distributors Pvt Ltd. (Unit 1, 4, 5)

Practical Action. Livelihood Centered Approach to Disaster Management – a Policy Framework (practicalaction.org/?id=disasters\_livelihood\_approach) (Unit 9)

Report of the Principles of disaster management (2006). Workshop held in New Zealand, June 2006. (training.fema.gov) (Unit 2)

Role of Financing in effective risk management. E. Gurenko and R. Lester. World bank. 2004. (Unit 4)

The Sphere Humanitarian Charter and Minimum Standards in Disaster Response, Published by the Sphere Project, 2004 edition. (Unit 8)

UN Disaster Management Training Program (1994). Disasters and development. 2nd edition, UN Publication. (Unit 9)

UNDP (2004). Crisis prevention and recovery. Chapter 1: Development at Risk. UNDP publications on disasters. (Unit 9)

Velasquez, J. et al. (1999). A New Approach to Disaster Mitigation and Planning in Mega-Cities: The Pivotal role of Social Vulnerability in Disaster Risk Management. In: Cities and the Environment: New Approaches to Eco-Societies, ed. T. Inoguchi, E. Newman and G. Paoletto. United Nations University Press, Tokyo. pp. 161-184 (Unit 5)

World disasters report 2002 (Unit 5)

World Disasters Report, 2003 (Unit 4, 8)

World disasters report 2004 (Unit 6)

World Disasters report 2005 (Unit 10)

### Certificate course in Environment Management and Disaster Mitigation

preamble: The course will provide a scientific understanding of the types, causes, frequency, magnitude and effects of natural environmental and man made disasters at different spatial and temporal scales. Links to global trends such as environmental degradation, persistent poverty, and growing urban density will be examined. This will lead to an appreciation of the cultural, economic, political and social factors that combine to increase vulnerability to disasters. The participants will also be introduced to appropriate technical skills to monitor, manage and mitigate hazards and disasters. The institutional setup of governments, and the roles and responsibilities of different levels of government in achieving developmental objectives will be assessed. In addition the evolving role of local actors in the context of city management and community-based disaster mitigation will be examined. Detailed understanding of the issues discussed in this course can be developed by taking other certificate courses of the Centre dealing with these issues.

### Ordinances and Regulations for the Certificate Course in Environment Management and Disaster Mitigation

- 0. 5726 : A candidate for being eligible for admission to the Certificate course in Environment Management and Disaster Mitigation must have passed the Bachelors degree examination in any branch of the University of Mumbai or an equivalent examination of another University of India/Abroad recognized by this University as equivalent thereto. The candidate must have passed the bachelors degree with at least 45% marks.
- 0. 5727 :: Admission for the Certificate course will be open to the students from foreign countries on recommendation by the Ministry of Education and Cultural Affairs, Government of India and through proper channel. However their application will be considered subject to minimum qualifications to their eligibility of admission.
- R. 5779: The duration of the Certificate course in Environment Management and Disaster Mitigation shall be five months.
- R. 5780: The number of lectures for the Certificate course will be four hours on
- R. 5781: Intake capacity of the course will be 30.
- R. <u>5782</u>: The examination of the Certificate Course will be held in TWO parts A mid term exam (with 40% weightage) and another at the end of the course (with 60% weightage.
- R. 5783: Passing of the mid term exam will not be a requirement for appearing for the
- R. 5784: To pass the Certificate course in Environment Management and Disaster Mitigation, the candidate must obtain a minimum of 50% marks overall (in mid term and end term examination taken together).

The fees for the course is proposed to be Rs. 1,500 per student. With the capacity of 30 the test, that comes to Rs. 45,000. The expenses are estimated to be Rs. 43,000 directly for the course and Rs. 2,000 is kept as sinking fund for collective expenses for the Centre, like brochure printing, advertising, seminars, etc.

### Syllabus for the Certificate course in Environment Management and Disaster Mitigation

### Unit I: Environmental balance (4 lectures)

- Environment and Ecological Principles
- Concept of Ecosystem
- Changing Man-Environment relations
- Causes and impacts of Environmental Imbalance

### Unit 2: Natural Disasters: Types, Causes and Effects ((3 lectures)

- Earthquakes and Volcanoes
- Floods and Droughts
- Cyclones, Cloud Bursts and Hurricanes

## Unit 3: Man made Disasters: Types, Causes and Impacts -Specific examples ((3 lectures)

- Chemical Incidents
- Biological Agents and highly contagious diseases
- Radiation and Nuclear
- National and International Terrorist Attacks
- Transport Incidents (Road, Rail, Air, Sea)

### Unit 4: Potential Disasters and Remedial Measures (8 lectures)

- Climate Change
- Ozone Hole
- Deforestation
- Desertification
- Hazardous Waste Disposal
- Water Scarcity

Mid term exam: 2 hours

### Unit 5: Risk and Vulnerability Analysis (4 lectures)

- Concept
- Indicators
- · Measurement
- Zonation
- Evaluation

### Unit 6: Sustainable Development and Environmental Management (6lectures)

- · Concept of Sustainable Development
- Impact of Development Plans and Policies
- Institutional Framework for Disaster Mitigation at global, regional and local levels
- Environment Impact Assessment

### Unit 7: GIS and Disaster Management Information System (12 lectures)

- Introduction and overview of GIS: Software, Systems, Component and Functionality
- Database for Disaster Management: Sources, Acquisition, Creation of database
- Mapping environmental parameters, vulnerability zones and disasters
- Analysis, Query building and generating a Disaster Information System
- Introduction to model building for effective remedial measures

#### Unit 8: Field visits to disaster-prone areas (2 visits)

End of term exam: 2 hours

#### References:

- 1. Ahmed, Y. J. and Sammy, G. K. (1985): Guidelines to Environmental Impact Assessment in Developing Countries, Hodder and Stroughton, Sevenoaks.
- 2. Adams, W. M. (2001): Green Development: Environment and Sustainability In the Third World, Routledge, London.
- 3. Calvert, P. S. (1999): The South, the North and the Environment, Pintee, London and New York.
- 4. Ewusie, J. Y. (1980): Elements of Tropical Ecology, Hainmann Education Books Inc. London.

- 5. Heywood, I. et al (2002): An Introduction to Geographical Information Systems, Pearson Education Limited, New Delhi.
- 6. Masser, Ian (1998): Government and Geographical Information Systems, Taylor & Francis Group, London.
- UNFPA (1992): Population, Resources and Environment The Critical Challenges, United Population Fund, London.
- 8. Murthy, D. B. (2007): Disaster Management Text and Case Studies, Deep and Deep Publ. Pvt. Ltd., New Delhi.
- 9. Ghosh, G. K. (2006): Disaster Management Volumes I VI, APH Publ. Corp. New Delhi.
- 10. World Disasters Reports, 2003 2005.

### Certificate course in Disaster Counseling

### preamble:

### Course objectives :

- To fine tune already existing counseling skills in the participants to address specific issues in disaster counseling.
- 2. To train the participants for appropriate action at times of disaster, so that a ready resource is available in the city should such a need arise. Names of trained people can then be registered with the Mumbai police, various hospitals, NGOs and Municipal corporation records.

#### Target group:

psychologists from various specializations, with a preference given to Counseling, Clinical and Social Psychologists with a Master's degree in the subject. The certificate issued at the end of the course may render them more empowered as volunteers and counselors at any time of crisis in the future. An entrance interview will be held. People working in other organizations are welcome, and timings are adjusted to suit such candidates. The course could also be thrown open to people, professionals and students, who would like to become more aware about the issues involved in Disaster Counseling, although preference will be given to in-service counselors. This certificate course may be pursued simultaneously with other University courses as well.

# Ordinances and Regulations for the Certificate Course in Disaster Counseling

- 0. 5723: No strict educational eligibility criteria are applied for this course, since it is created in response to a social need. It is expected that the candidate will have a good command over written and spoken English since the teaching and assignment will be in this language. Further, the candidate should have at least an HSC degree or equivalent, and an interest in working as a volunteer in times of social crises. An entrance interview will be held at the center before granting admission.
- O<u>5729</u>: Admission for the Certificate course will be open to the students from foreign countries on recommendation by the Ministry of Education and Cultural Affairs, Government of India and through proper channel. However their application will be considered subject to minimum qualifications to their eligibility of admission.

- R 5786: The duration of the Certificate course in Disaster Counseling shall be five months.
- R 5787: The number of lectures for the Certificate course will be two hours per week.
- R 5768: Intake capacity of the course will be 30.
- R 5789: The examination of the Certificate Course will comprise of an assignment to be submitted at the end of the course, and assessed by pre-selected teachers.
- R 5790: To pass the Certificate Course in Disaster Counseling, the candidate must obtain a minimum of 50 percent marks in the assignment. Failing this, the candidate may be asked to revise the same. If the assignment is not satisfactory even thereafter, the candidate will not receive the certificate.
- R 5791: To get the certificate, the student should have minimum 75% attendance in classrooms and 100% attendance in field trips.

The fees for the course is proposed to be Rs. 1,500 per student. With the capacity of 30 students, that comes to Rs. 45,000. The recurring expenses are estimated to be Rs. 43,000 directly for the course. Rs. 2000 will go towards the sinking fund for collective expenditure of the Centre, like publicity for the courses, etc.

#### Syllabus for course in Disaster counseling

#### Unit 1. Basic counseling skills.

- focus on needs of the disaster affected population
- · behavioral health issues
- dealing with physical comfort and care needs
- crowding, and privacy issues.

(8 hours)

#### Unit 2. Dealing with morbidity

- Post Traumatic Stress Disorder
- Major Depressive disorder
- Anxiety and
- Panic.

(8 hours)

Unit 3. Screening and assessment tools in Disaster Management, as a precursor to intervention. (4 hours)

#### Unit 4. Handling grief and loss

· facilitating ventilation.

(4 hours)

#### Unit 5. Building resilience.

- Individual counseling approaches.
- · Augmentation of stress coping.

(4 hours)

#### Unit 6. Addressing vulnerable and special populations

- group interventions and community programs.
- cultural sensitivity and relevance
- multicultural counseling

(8 hours)

#### Unit 7. Care of the caregiver

- professional caregivers and volunteers
- handling burnout.

(4 hours)

#### References

Psychological First Aid. Fact Sheet from the Center for the study of traumatic stress. www. usuhs.mil/csts

Somasundaram, D.J et al. (2006) Management of Trauma in special populations after disaster. Journal of Clinical Psychiatry, 67, 7-14.

Ursano, Robert et al (2006) The impact of Disasters and their aftermath on mental health. Journal of Clinical Psychiatry, 67(2), 64-73.

Disaster Response Education and Training Project, Center for the Study of Traumatic Stress
<a href="https://www.usuhs.mil/csts/">www.usuhs.mil/csts/</a>

Disaster Risk reduction The Indian experience. Government of India, Ministry of Affairs, National Disaster Management Division. www.ndmindia.nic.in

onledge Management in Disaster Risk Reduction. The Indian Approach. Government of Ministry of Home Affairs, National Disaster Management Division. n.ndmindia.nic.in

gards a safer India Education in Disaster Management. Central Board of Secondary action in collaboration with Ministry of Home Affairs, National Disaster Management ision. www.cbse.nic.in