









Ministry of Housing & Urban Affairs, Govt. of India in collaboration with SPA, New Delhi & BMTPC launches

# e-Course on Vulnerability Atlas of India

It is a basic e-learning course that offers awareness and understanding about natural hazards, helps identify regions with high vulnerability with respect to various hazards (earthquakes, cyclones, landslides, floods, etc.) and specifies district-wise level of damage risks to the existing housing stock. The e-course will be a tool for effective & efficient disaster mitigation & management in the field of Architecture, Civil Engineering, Urban & Regional Planning, Housing & Infrastructure Planning, Construction Engineering & Management and Building & Materials Research.

# **LAUNCH DATE**

29th August, 2019

# **COURSE FEE**

Rs.3000/- per person (One-time, Non-refundable)

# **COURSE AVAILABLE AT**

www.spa.ac.in

Interested applicants may also write to ghtc-mhua@gov.in / ska@bmtpc.org / drpsnrao@hotmail.com for applying to e-Course.

# **Target Group**

- Individuals who wish to keep themselves abreast with knowledge about various hazards, vulnerability & disaster mitigation measures, in order to be better prepared.
- Students/Faculty/Practitioners/Researchers of Urban and Regional Planning, Civil Engineering and Architecture Colleges or any other allied disciplines
- Public/Private Professionals working in the area of housing & infrastructure sector e.g. Road, Rail, Aviation, Ports, etc.
- Defence/Central Armed Police Forces involved in Civil Engineering projects
- Officials of National/State Disaster Management Authorities
- Central/State/Local Government Officials
- Members of Consulting Organisations
- Members of Civil Society Organisations

### On successful completion of the course, a Certificate will be awarded to the participant.

The e-course on Vulnerability Atlas of India has been launched as one of the activities under "Construction Technology Year (2019-20)" which was announced by the Hon'ble Prime Minister during Construction Technology India 2019: Expo-cum-Conference under Global Housing Technology Challenge – India on 2<sup>nd</sup> March, 2019 at New Delhi.

It will be offered jointly by the School of Planning & Architecture, New Delhi and Building Materials & Technology Promotion Council (BMTPC), Ministry of Housing & Urban Affairs.

# SALIENT FEATURES OF THE E-COURSE

- Applicants can register and log on to the e-course from anywhere at any time.
- Course does not require any face to face discussion or physical appearance in the examination.
- Course is beneficial for those who are not able to attend physically or do not have sufficient time to attend programmes in training centres.
- e-Course will help individuals to comprehend and move at their own pace. There are no restrictions on duration of
- There will be Multiple Choice Questions (MCQ) based self-assessment after each module. In case an individual is not able to score satisfactorily in a particular module, applicant is encouraged to re-read the module and go through self-assessment again.
- At the end of the course, there will be final examination which will again be MCQ based.
- An applicant will get maximum 3 attempts to complete the final examination.
- If an applicant fails after 3 attempts, applicant will have to go through the Course again from the beginning.
- On successful completion of the course, a self-generated digital certificate will be awarded to the applicant.
- There will be six Contact Programmes for enrolled applicants who have successfully completed the e-course in one year, (one at SPA, New Delhi and five other at designated Incubation Centres of GHTC-I at IIT Bombay, IIT Kharagpur, IIT Madras, IIT Roorkee & NEIST Jorhat/CBRI Roorkee), during which certificate will be delivered in a programme. Candidates will have option to choose any place suiting their convenience.

### **Course Contents**

#### Module 1: What is Vulnerability Atlas of India?

- Introduction to the concept of natural hazards and natural disasters
- Vulnerability profile of India
- What is Vulnerability Atlas of India?

## Module 2: Earthquake Hazard and vulnerability to housing

- **Earthquakes**
- Earthquake magnitude and intensity
- Epicentre of an earthquake
- Earthquake/Seismic Zones
- Earthquake Hazard Maps
- Types of structures/buildings and classification of damages to buildings
- Effects of earthquakes on housing
- Earthquake resistant measures for housing

## Module 3: Wind / Cyclone Hazard and vulnerability to housing

- Wind and cyclonic storms
- Basic wind speed zones
- **Design Wind Speed and Pressures**
- Wind Hazard Maps
- Cyclone Occurrence Map of coastal India
- Storm surge
- Wind/cyclone resistant measures

# Module 4: Flood Hazard and vulnerability to housing

- Floods
- Flood prone areas in the country
- Flood Hazard Maps
- Probable maximum precipitation
- Flooding in Coastal Areas
- General Protection of Habitat/Buildings
- Construction of Flood Resistant Houses

## Module 5: Landslides, Thunderstorm and Tsunami Hazards

- Landslides
- Landslide Incidence Maps
- **Thunderstorms**
- Thunderstorm Incidence Map of India
- Tsunami

## Module 6: Housing Vulnerability Risk Table

- House types
- Risk of damage to house types
- Damage risk levels for earthquakes, wind storms and floods
- The Housing Vulnerability Risk Tables

#### Module 7: How to Use Vulnerability Atlas of India

- Usage of Vulnerability Atlas of India
- How to read Vulnerability Atlas of India
- **Definitions of Disaster Related Terms**

#### For further information, please contact:

#### Director

#### School of Planning and Architecture

4-Block-B, Indraprastha Estate, New Delhi 110002 Ph. +91 011 - 2370 2375, 2370 2376; Fax. +91-011 - 2370 2383 E-mail: drpsnrao@hotmail.com



@spanewdelhi

**Executive Director Building Materials & Technology Promotion Council** 

Core-5A, 1st Floor, India Habitat Centre, Lodhi Road, New Delhi Tel: +91-11-24636705, 24638096; Fax: +91-11-24642849 E-mail: ska@bmtpc.org

@bmtpc.mhua

Joint Secretary & Mission Director (Housing for All) Ministry of Housing & Urban Affairs, Govt. of India Room No. 115-G, Nirman Bhawan, New Delhi-110011

Tel: 011-23061420, 23061419 E-mail: ghtc-mhua@gov.in









@bmtpcdelhi