

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.

The e-Course on Vulnerability Atlas of India was launched by Shri Hardeep S Puri, Hon'ble Minister of State (I/C) for Housing and Urban Affairs, Government of India on August 29, 2019.

## COURSE FEE

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

## COURSE AVAILABLE AT

[www.spa.ac.in](http://www.spa.ac.in)

Interested applicants may also write to  
[ghtc-mhua@gov.in](mailto:ghtc-mhua@gov.in) / [ska@bmtpc.org](mailto:ska@bmtpc.org) / [drpsnrao@hotmail.com](mailto: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 the course.
- 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:

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