

Short Course on
Earthquake Vulnerability Assessment of Dams
Potential Failure Modes Approach
6th to 10th January 2025

Supported by



Scheme for Promotion of Academic and Research Collaboration
Ministry of Education, Government of India



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Organized

at

**National Centre for Earthquake Safety of Dams
Malaviya National Institute of Technology Jaipur**

Earthquake Vulnerability Assessment of Dams

Potential Failure Modes Approach

National Centre for Earthquake Safety of Dams

Detailed Program

Day 1: 06 January 2025	
09:00	Welcome
09:30	Expectations from the Short Course
10:00	Performance of Dams in Past Earthquakes
11:00	<i>Tea</i>
11:30	Earthquake Vulnerability Assessment of Concrete Dams: <i>Methods of Analysis</i>
13:00	<i>Lunch</i>
14:00	Equivalent Static Method for Concrete Dams: <i>Fundamental Concepts</i>
15:00	Equivalent Static Method for Concrete Dams: <i>Hands-on Exercise</i>
16:00	<i>Tea</i>
16:30	Finite Element Modeling of Dam-Foundation-Reservoir System: <i>Stepwise Procedure</i>
18:00	<i>Day 1 Concludes</i>
Day 2: 07 January 2025	
09:00	Earthquake Vulnerability Assessment of Earthen Dams: <i>Methods of Analysis</i>
11:00	<i>Tea</i>
11:30	Numerical Modeling of Earthen Dams: <i>Important Considerations</i>
13:00	<i>Lunch</i>
14:00	Numerical Modeling of Earthen Dams: <i>Stepwise Procedure</i>
16:00	<i>Tea</i>
16:30	Numerical Modeling of Earthen Dams: <i>Hands-on Exercise</i>
18:00	<i>Day 2 Concludes</i>
Day 3: 08 January 2025	
09:00	Potential Failure Modes Approach for Risk Assessment of Concrete Dams
11:00	<i>Tea</i>
11:30	Potential Failure Modes Approach for Risk Assessment of Earthen Dams
13:00	<i>Lunch</i>
14:00	Estimation of Earthquake Hazard: <i>Fundamental Concepts</i>
16:00	<i>Tea</i>
16:30	Estimation of Earthquake Hazard: <i>Stepwise Procedure</i>
18:00	<i>Day 3 Concludes</i>
Day 4: 09 January 2025	
09:00	Earthquake Testing of Dams: <i>Fundamental Concepts</i>
11:00	<i>Tea</i>
11:30	Instrumentation and Earthquake Testing of Dams: <i>Data Processing and Interpretation</i>
13:00	<i>Lunch</i>
14:00	Geophysical Methods for Condition Assessment of Concrete Dams
16:00	<i>Tea</i>
16:30	Geophysical Methods for Condition Assessment of Earthen Dams
18:00	<i>Day 4 Concludes</i>
Day 5: 10 January 2025	
09:00	Stability of a Cracked Dam: <i>Fundamental Concepts and Material Properties</i>
10:00	Stability of a Cracked Dam: <i>Case Study</i>
11:00	<i>Tea</i>
11:30	Stability of a Cracked Dam: <i>Hands-on Exercise</i>
13:00	<i>Lunch</i>
14:00	Earthquake Retrofit of Dams: <i>Fundamental Concepts</i>
15:00	Earthquake Design of Dams: <i>Draft Indian Standard</i>
16:30	<i>Open Session: Q&A</i>
17:30	Valediction
18:00	<i>Tea</i>

For more details and online registration: ncsd.mnit.ac.in/trainingprograms

