



COURSE NUMBER

FHWA-NHI-130093W

COURSE TITLE

Introduction to Earthquake Engineering

130093W Introduction to Earthquake Engineering is a Web-based Training (WBT) prerequisite to the 3-day 130093A Displacement-Based LRFD Seismic Analysis and Design of Bridges Instructor-led Training (ILT). The participants will generally be notified to take the WBT about 1 month before the 130093A ILT session and must complete it before the start of Day 1 of the ILT. This WBT consists of 5 lessons including: Introduction to Earthquake Seismology (Lesson 1); Damages to Bridges due to Strong Motion (Lesson 2); Single Degree-of-Freedom (SDOF) Systems and Response Spectra (Lesson 3); AASHTO Design Ground Motion Characterization (Lesson 4); and Introduction to Geotechnical Hazards (Lesson 5).

OUTCOMES

Upon completion of the course, participants will be able to:

- Describe basic concepts of plate tectonics and seismology
- Explain fundamental concepts of modern seismic design
- Identify parameters used to characterize earthquake ground motions
- Recognize the steps employed in a probabilistic seismic hazard analysis
- Characterize design ground motions in accordance with AASHTO
- List the different types of geotechnical hazards

TARGET AUDIENCE

The target audience for this course includes bridge and geotechnical engineers with 0 to 20 years of experience that are preparing to attend the 130093A Instructor-led Training.

TRAINING LEVEL: Basic

FEE: 2016: \$0 Per Person; 2017: \$0 Per Person

LENGTH: 4 HOURS (CEU: .4 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

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