

**COURSE NUMBER**

FHWA-NHI-132035

**COURSE TITLE****Rock Slopes**

This course presents geological investigation techniques, shear strength theories for determining rock strength, and design methods for rock slopes with different failure mechanisms. Other topics include rock blasting, rock slope stabilization methods, and contracting issues. Classroom instruction includes the discussion of sample problems and case histories involving rock slope analyses and designs.

Participants will receive a comprehensive reference manual (FHWA-NHI-99-007) and the accompanying exercises (FHWA-NHI-99-036). The reference manual covers investigation, design, and construction of rock slopes for highway/geotechnical engineers. It is geared towards practicing engineers who are involved with rock slope design and stabilization, but may not have the complete theoretical background. The exercises (FHWA-NHI-99-036) are designed to promote interaction in the classroom and to illustrate the basic principles and analyses. Solutions are included with each exercise.

**OUTCOMES**

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

- Describe the basic principles of rock slope design
- Plan and execute a geological investigation, including geologic mapping
- Perform appropriate in situ and laboratory strength tests
- Determine rational design parameters by proper evaluation of in situ and laboratory test data along with appropriate rock strength correlations
- Identify the failure mechanisms associated with rock slopes and apply appropriate design methodologies
- Design effective rockfall protection and slope stabilization measures
- Design a monitoring program for cut slopes

**TARGET AUDIENCE**

The target audience for this course includes FHWA, State, and local highway agency employees; college and university faculty; and consultant engineers/geologists who are or will be involved in the design, excavation, and stabilization of rock slopes. An undergraduate degree in geology, engineering geology, civil engineering, or equivalent engineering experience in the highway/transportation field is desirable.

**TRAINING LEVEL:** Intermediate

**FEE:** 2021: \$260 Per Person; 2022: N/A

**LENGTH:** 2 DAYS (CEU: 1.2 UNITS)

**CLASS SIZE:** MINIMUM: 20; MAXIMUM: 30

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