

# Concrete Slabs-On-Ground

ONE DAY, 7.5 HOURS

Learn to design, specify, and build quality concrete floors

## Program Content:

### ■ Introduction

Seminar objectives

### ■ Soil Support Systems

Design considerations  
Desirable properties  
Post-tensioning—expansive soils  
Vapor transmission control

### ■ Concrete Materials Analysis

Desirable characteristics for slabs-on-ground  
Beyond strength and  $w/cm$   
Optimizing aggregate gradation  
Controlling shrinkage  
Pozzolans and admixtures

### ■ Curling of Joints and Cracks

Causes  
Effects of design, materials, and construction  
Minimizing or eliminating curling

### ■ Slab System Design

Thickness design methods  
ACI 360 slab type selection  
Portland Cement Association  
Wire Reinforcing Institute  
Post-Tensioning Institute  
Corps of Engineers  
Shrinkage-compensating concrete

### ■ Slab-on-Ground Reinforcing

Why reinforce slabs and pavements?  
Current quantity calculations  
Fiber reinforcing

### ■ Joint Detailing and Load Transfer

Joint types and application  
Round, square, plate, and diamond dowels  
Dowel alignment systems

### ■ Floor Surface Flatness and Levelness

F-Numbers, straightedge, and other systems  
Random traffic  
Defined traffic (“Superflat” tolerances)  
Construction techniques to achieve flat floors

### ■ Curing and Surface Treatments

Liquid surface treatments  
Dry shake hardeners  
Moist versus membrane cures  
Special finishes

### ■ Problems

Recognition, causes, prevention

## Who should attend:

Specifiers, architects, contractors, building owners, government agencies, and all others seeking the most up-to-date information on concrete slabs-on-ground.

## Instructors:

Patrick J. Harrison, Jerry A. Holland, W. Calvin McCall, Arthur W. McKinney, Richard E. Smith, Bruce A. Suprenant, and R. Gregory Taylor. For more detailed information on the faculty, go to [www.concreteseminars.com](http://www.concreteseminars.com).

## Seminar handouts:

Guide for Concrete Floors and Slab Construction (ACI 302.1R)  
Design of Slabs-on-Ground (ACI 360R)  
Course Notes authored by the instructors

