

Introduction

Flat slabs are a widely used method of floor construction in the UK. They are generally designed using finite element analysis. This course will explain the provisions within Eurocode 2 for flats slabs and how to use finite element analysis to accurately design flat slabs. The course will explain what input data to use for the software and how to use the output, but does not cover the use of specific software.

Aims & Objectives

On completion of this course delegates will know understand how to design flat slabs and how to safely use finite element analysis to assist in the design.

After this course delegates will:

- Be able to produce an initial size for a flat slab
- Understand the provisions in Eurocode 2 for the design of flat slabs including:
 - Flexure
 - Punching shear
 - Deflection
- Understand the guidance in other design documents, including Concrete Society Technical Report 64
- Understand how to use finite element analysis for the design of flat slabs.

Course Outline

- Introduction to flat slabs
- Initial sizing of flat slabs
- Designing for flexure – hand calculations
- Designing for deflection – hand calculations
- Designing for punching shear
- Introduction to finite element analysis
- Designing for flexure using finite element analysis
- Designing for deflection using finite element analysis

Throughout the day delegates will be asked to solve workshop problems with support from the course tutor.

Intended for:

This course is intended for structural engineers who wish to develop an understanding of the latest design techniques for flat slabs.

Pre-course Requirements

Candidates should bring a calculator, pencil, ruler and eraser.

Course Duration:

Days (hrs) e.g 1 day (6 hours) IPD/CPD