TRAINING

SCIAENGINEER

# SCIA ENGINEER – ADVANCED TRAINING FEM (1 DAY)

## Description

During this training you will learn to apply the principles and the use of the **finite element method** in SCIA Engineer on the basis of **practical examples**. Both **new and experienced users** receive answers to questions such as:

- what to pay attention to by the finite element mesh generation?
- sense and nonsense of mesh refinements
- why are there peak results… and the solution to prevent them?
- how to model and interpret orthotropic elements?
- which tools are available for modeling ribbed floors?

## What knowledge will you obtain?

As a user, you will acquire insight into these applications thanks to clear and step-by-step explanations of all the discussed features by our Customer Service Engineer. At the end of the course, you've build up enough knowledge and confidence to:

- create easily and correctly a finite element model and interpret the calculated results;
- nuance peak results and average them correctly;
- implement and interpret orthotropic characteristics in a correct way;
- calculate ribbed floors taking into account the correct eccentricities.

## Program

### Finite element mesh

- background to generate the finite element mesh
- when and how to apply mesh refinements
- the importance of manual entered global or local mesh refinements

### Calculation methods

- difference between Mindlin and Kirchhoff

### Peak results

- explanation of the origin of peak results
- commentary and application of different techniques to reduce peaks

### Orthotropic

- theoretical approach of the calculation of orthotropic parameters
- different approaches to model orthotropic elements
- interpretation of the results

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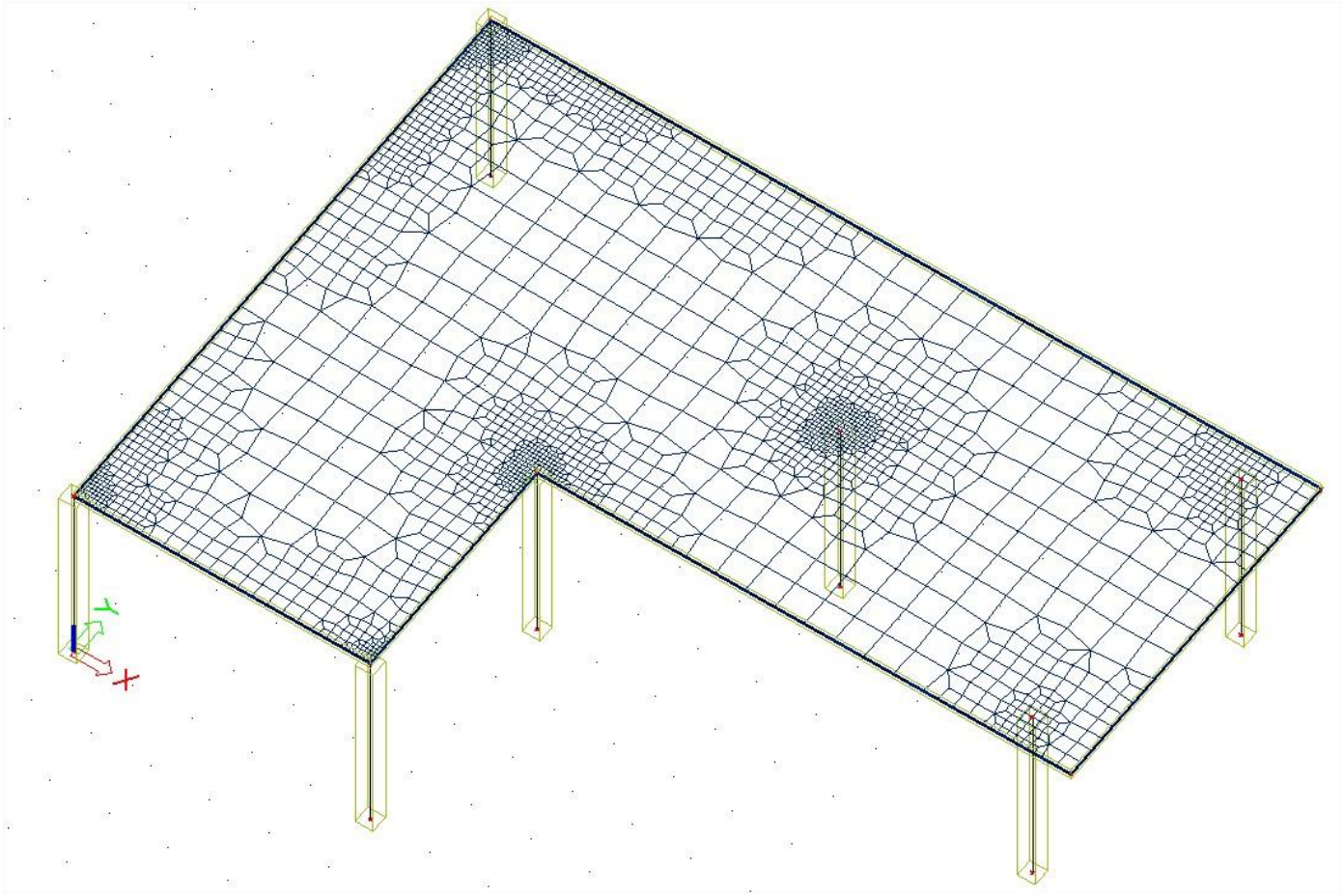
**Ribbed floors**

- input parameters of ribbed floors
- application and interpretation of results
- explanation of the various eccentricities that are taken into account



# TRAINING SCIA ENGINEER

## Working method

The training is provided by an experienced engineer from the Customer Service Department of SCIA. To guarantee the interaction between the participants and the trainer, the course is given for a small group of up to 8 people.

Each **participant will use the software** and will put the different topics of the course immediately into practice, under the supervision of the trainer. At the end of the training you will have the necessary knowledge to **use the parts discussed in an autonomous and efficient way**.

At the beginning of the training, each participant will receive a **syllabus**. This includes a detailed explanation of the different functionalities and treated examples.

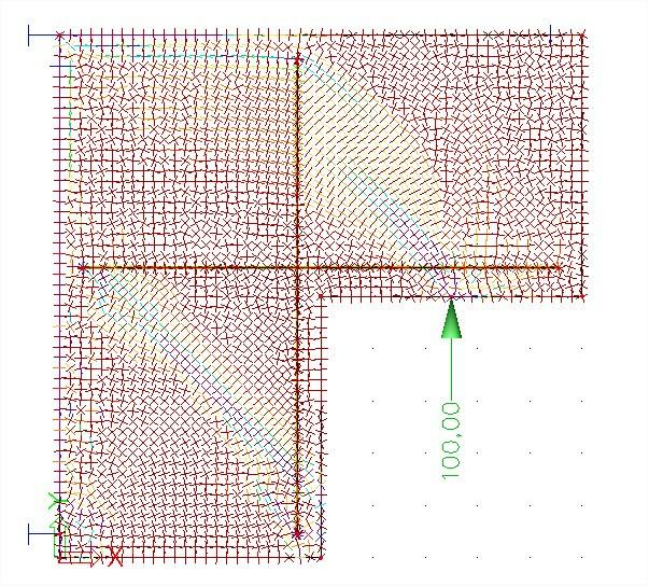
After the training, the companies who do not have the ability to use all the features discussed in the license of the software, will have the opportunity to request a free try-out license which is valid for 30 days.

## Prerequisites

A basic knowledge of the principles of SCIA Engineer is recommended.

## Certificate

Each participant will receive an official SCIA Engineer “Advanced training FEM” certificate at the end of the training, signed by the trainer.




***Disclaimer**: The content of the training may be modified without notification (05/2016).*