



TRAINING SCIAENGINEER

SCIA ENGINEER – ADVANCED TRAINING DYNAMICS (1 DAY)

Description

This one-day course focuses on the advanced principles of **dynamic calculations** in SCIA Engineer. It clarifies the application on both frame structures as well on finite elements on the basis of **practical examples**. The training is geared to more **advanced users**.

During this course, the participants will receive answers to:

- how to calculate and interpret natural frequencies of the structure?
- how to use harmonic loads?
- applying and calculating seismic loads (eg. earthquakes)

What knowledge will you obtain?

Our Customer Service Engineer gives step by step explanation, so that the participants can calculate, interpret and check dynamic calculations in a fast and accurate way. Results of the acquired knowledge include:

- insight into the theoretical background for calculation of natural frequencies of constructions and practical applications in SCIA Engineer
- correct and efficient introduction of masses
- input and calculation of dynamic loads (harmonic loads, seismic loads, Karman vibration, ...)

Program

Eigen frequencies

- Theoretical background
- Input of masses and mass combinations
- Calculation of eigen values and eigen frequencies

Harmonic loads

- Theoretical background
- Interpreting results
- Resonance

Seismic analysis

- Theoretical background
- Introduction of seismic spectra
- Input of seismic loads and combinations



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- Model superposition

Damping

- Theoretical background
- Apply several dampers in SCIA Engineer

Reduced analysis model

- Theoretical background
- IRS method (Improved Reduced System) in SCIA Engineer
- Accidental eccentricity

Vortex shedding

- Theoretical background
- Apply Karman vortices in SCIA Engineer

Direct time integration

- Theoretical background
- Input of loads and interpreting results

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

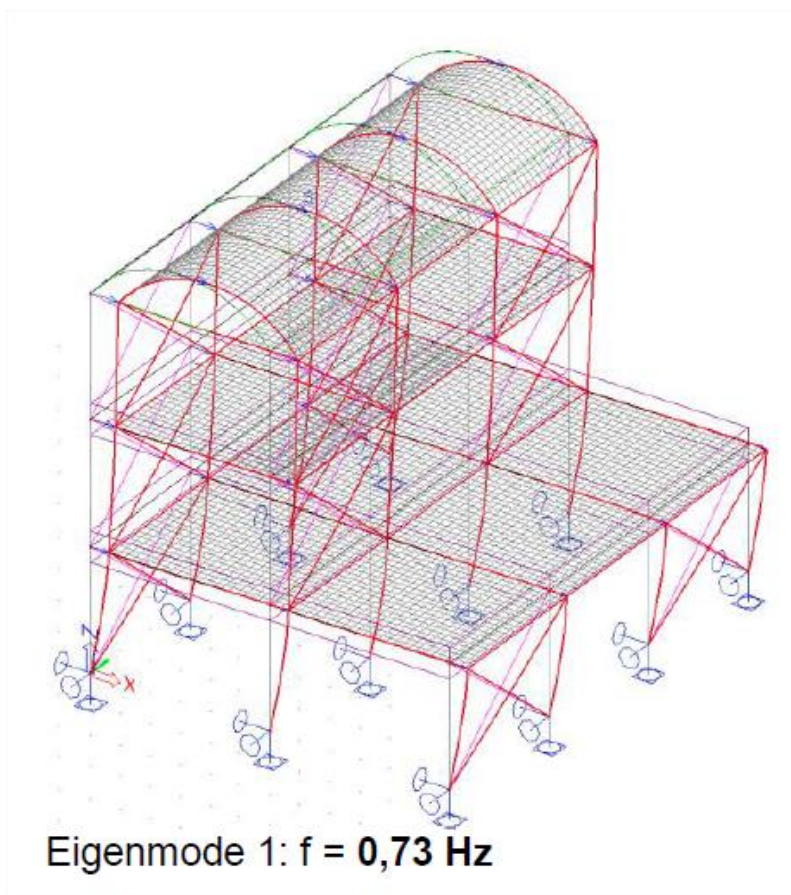
This course is intended for more experienced users with the necessary general knowledge of structural design.



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Certificate

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



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