

S110F: SAFE v12 Hands-On Training

INTRODUCTION

SAFE v12 is the ultimate integrated tool for designing reinforced and post-tensioned concrete floor and foundation systems. This version introduces versatile 3D object-based modeling and visualization tools. Charged with the power of SAPFire, this release redefines standards in practicality and productivity. From framing layout to detail-drawing production, SAFE integrates every aspect of the engineering design process in one easy and intuitive environment. SAFE v12 is vastly enhanced and improved in every facet. It provides unmatched benefits with its unprecedented combination of power, functionality and ease-of-use.

This two-day hands-on SAFE training course will provide practicing engineers with a comprehensive overview of the new features and required know-how on how to use the all new SAFE v12 to effectively model, analyze and design various floor systems. An introductory session on P/T modeling with SAFE P/T is also included.

COURSE OUTLINE

Introduction to SAFE 12

- SAFE key features overview
- Sample model from Template (Start to Finish)
- Loading, Analysis, Design & Detailing

SAFE12 GUI overview

- Screen manipulate tools
- Drawing Tools
- Snap Control
- Edit Line/Area
- Replicate
- Creating Default.FDB
- Draw beams, slabs, columns, walls
- AutoCad Reference drawing

Understanding FEM in SAFE

- Objects overview
- 1D elements
- 2D elements
- Support & Restraint
- Springs
- Design Strip Vs FEM methods
- Orthotropic slab properties
- Slab stiffness modifier
- Compatibility vs Equilibrium torsion

Creating a SAFE model

- Loading
- Load Pattern
- Load combination
- Load Case
- Loading the model
 1. Point load
 2. Line load
 3. Area load
 - a. Uniform
 - b. Non-uniform



- Special features
- Meshing
 1. Mesh refinement
 2. Mesh orientation based on Area local axis
 3. Autoline constraint
- Insertion point offset
- Beam design with Axial loading
- Releasing
- Beam release
- Slab releases (Edge and Line)
- Advanced modelling options
- Rigid Diaphragm for top of columns and wall above
- Ignore vertical offset for Non PT model

Linear Analysis with SAFE

- Modelling Beam
- Modeling Floor
- Create model
- Analysis model
- Design beam and slab
- RC Detailing

Advanced/Nonlinear Analysis with SAFE

- Modal Analysis
- Cracked Analysis
- Cracked Analysis (Creep + Shrinkage)
- Allow Uplift
- Cracked width

Introduction to SAFE P/T

- PT modelling, analysis & design
- PT output and display

Integration with ETABS

- Import floor from ETABS
- Import Spectral forces

SPEAKER PROFILE

CHOO, JUNE SHYAN P.E.

MSCE, MPW, BSCE
M.ASCE (USA), M.SEI (USA), MIES, MSSSS



Er. Choo is a Singapore Registered Professional Engineer with many years of consulting experience both in Singapore and USA. In USA, he was a consultant with Dietrich Industries, Inc. and designed many Light-gage steel frame structures scattered over USA. He also spearheaded Dietrich Industries's first IT project worth USD 4 millions which enable their engineers to model, analyze and design any steel structures in 3D with automatic shop drawing generation. In Singapore, he was a consultant at CPG Consultants Pte Ltd where he designed and supervised many building projects.

He is currently the Technical Director of Otte International Pte Ltd, which specializes in advanced and innovative IT solutions for Building, Structural and Geotechnical Engineering professionals. He has extensive experience in computer-aided analysis and design with advanced engineering software. He has conducted numerous training courses and seminars in Singapore and overseas.

Er. Choo graduated with Master of Public Works and Master of Science in Civil Engineering with a Full Academic Merit Scholarship from University of Pittsburgh, Pittsburgh, Pennsylvania, USA. He was awarded the Chi Epsilon (National Civil Engineering Honor Society, USA) scholarship in the Metropolitan District, the National Dean's List and School of Engineering Dean's List in his undergraduate studies in the same university.

COURSE INFORMATION

\$110F: SAFE v12 Hands-On Training

Date: 1st & 2nd Mar 2012 (Thu & Fri)
Time: 9:30 a.m. - 5:30 p.m.
Venue: New Horizons, Level 18 Central Plaza, 298 Tiong Bahru Road, Singapore 168730
Fee: **Early bird registrations received by 17th Feb 2012:**

SUM Subscribers: S\$727.60 per participant (Incl. 7% GST)

Non SUM Subscribers: S\$856.00 per participant (Incl. 7% GST)

For registrations received after 17th Feb 2012:

SUM Subscribers: S\$781.10 per participant (Incl. 7% GST)

Non SUM Subscribers: S\$941.60 per participant (Incl. 7% GST)



Terms and Conditions

- a) Seats are limited. Registration is on a first-come-first-served basis. Training places will be confirmed upon receipt of payment.
- b) All cancellation of registration must be made in writing. If you are unable to attend...
 - i) you will receive 90% refund of the registration fee if cancellation is received in writing more than 14 days before the event.
 - ii) you will receive 75% refund of the registration fee if cancellation is received in writing within 7 - 14 days before the event.
- c) Cancellations will not be accepted within 7 days of the course start date. However, a substitute delegate is welcome at no additional charge.

REGISTRATION FORM

Organization: **Department:**

Address:

Person in charge (Dr/Mr/Ms): **Job Title:**

Email: **Tel (O):** **(HP):** **Fax:**

Participants' Names:	PE No.:	Job Title:	Email:	Tea breaks	
<i>Please write clearly as it will be printed on the Certificate of Attendance</i>				<i>Vegetarian Halal</i>	
(Dr/Mr/Ms)	<input type="checkbox"/>	<input type="checkbox"/>
(Dr/Mr/Ms)	<input type="checkbox"/>	<input type="checkbox"/>
(Dr/Mr/Ms)	<input type="checkbox"/>	<input type="checkbox"/>
(Dr/Mr/Ms)	<input type="checkbox"/>	<input type="checkbox"/>
(Dr/Mr/Ms)	<input type="checkbox"/>	<input type="checkbox"/>

I hereby agree to abide by the terms and conditions stated above.

(Signature & Company Stamp)

Please fax the completed registration form to: **6483 3363**

An **invoice & confirmation email** will be sent to you upon receipt of your fax registration.

For enquiries, please contact us at (Tel) **6483 3323** or (Email) **info@ottegroup.com**