

S110F: SAFE v2016 Hands-On Training

INTRODUCTION

SAFE v2016 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 v2016 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 v2016 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 v2016

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

SAFE v2016 GUI overview

- a. Screen manipulate tools
- b. Drawing Tools
- c. Snap Control
- d. Edit Line/Area
- e. Replicate
- f. Creating Default.FDB
- g. Draw beams, slabs, columns, walls
- h. AutoCad Reference drawing

Understanding FEM in SAFE

- a. Objects overview
- b. 1D elements
- c. 2D elements
- d. Support & Restraint
- e. Springs
- f. Design Strip Vs FEM methods
- g. Orthotropic slab properties
- h. Slab stiffness modifier
- i. Compatibility vs Equilibrium torsion

Creating a SAFE model

- a. Loading
- b. Load Pattern
- c. Load combination
- d. Load Case
- e. Loading the model
 - i. Point load
 - ii. Line load
 - iii. Area load
 - Uniform
 - Non-uniform

- f. Special features
- g. Meshing
 - i. Mesh refinement
 - ii. Mesh orientation based on Area local axis
 - iii. Autoline constraint
- h. Insertion point offset
- i. Beam design with Axial loading
- j. Releasing
- k. Beam release
- l. Slab releases (Edge and Line)
- m. Advanced modelling options
- n. Rigid Diaphragm for top of columns and wall above
- o. Ignore vertical offset for Non PT model

Linear Analysis with SAFE

- a. Modelling Beam
- b. Modeling Floor
- c. Create model
- d. Analysis model
- e. Design beam and slab
- f. RC Detailing

Advanced/Nonlinear Analysis with SAFE

- a. Modal Analysis
- b. Cracked Analysis
- c. Cracked Analysis (Creep + Shrinkage)
- d. Allow Uplift
- e. Cracked width

Introduction to SAFE P/T

- a. PT modelling, analysis & design
- b. PT output and display

Integration with ETABS

- a. Import floor from ETABS
- b. Import Spectral forces

SPEAKER PROFILE

Er. Choo is a Singapore Registered Professional Engineer with over 20 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 USD4 millions which enable their engineers to model, analyze and design any steel structures in 3D with automatic shop drawing generation. Prior to Otte he was a consultant at CPG Consultants Pte Ltd where he designed and supervised many building projects.

He is the Technical Director of the Otte group of companies. Otte specializes in advanced and innovative IT solutions for Building, Structural and Geotechnical Engineering professionals. Er. Choo 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, 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.

CHOO JUNE SHYAN P.E.
 MSCE, MPW, BSCE
 M.ASCE (USA), M.SEI (USA), MIES, MSSSS



COURSE INFORMATION

S110F: SAFE v2016 Hands-On Training

Date: 8 - 9 November 2017 (Wed & Thu)

Time: 9:00am - 5:00pm

Venue: Otte Training Room, 1 Pemimpin Drive #10-11, One Pemimpin, Singapore 576151

Fees:	<u>MNT Subscribers</u>	<u>Non MNT Subscribers</u>
Fees per participant	S\$1,000	S\$1,200
Early-bird fees	S\$800	S\$1,000

Notes:

- i. Early-bird fees only valid for registrations received by 18 October 2017.
- ii. 20% discount for registration of a group of 3 and above. This 20% discount is not applicable to Early-bird registration.
- iii. Participants are required to bring their own laptops with support for WiFi connection.
- iv. Training License will be provided.

Terms and Conditions:

1. Due to limited seats of 20, registration is on a first-come-first-served basis. Training seats will be confirmed upon receipt of payment.
2. Cancellation of registration notice must be made in writing if you are unable to attend. Course fees refund as follows:
 - Notice received 14 days prior to course date - 90% refund.
 - Notice received 7 days prior to course date - 75% refund.
 - Cancellation will not be accepted if notice is received less than 7 days before the event; but a substitute delegate is welcomed at no extra charge.

REGISTRATION FORM

Organization: Department:

Address:

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

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

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

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

Person in charge Signature

Date & Company Stamp

Please submit the completed registration form to the fax or email address below. An invoice & confirmation email will be sent to you upon receipt of your registration.

Otte International Pte Ltd (CO/GST Reg.No. 200402669G)

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