# saber
Consulting . Training . Development

# FORECASTING PRINCIPLES AND BEST PRACTICES

# ABOUT
# ORGANIZERS



**Saber Middle East** is a vibrant consulting and training firm dedicated towards serving companies in the MENA region to achieve Operations Excellence. It is lead through partners who have over 20 years of international experience in USA, Brazil, the Middle East and GCC countries.



**The International Institute of Forecasters (IIF)**, is a non-profit organization dedicated to developing the knowledge on forecasting. Its main objective is bridging the gap between theory and practice, and bringing together decision makers, forecasters, and researchers from all nations to improve the quality and usefulness of forecasting.

## CONTACT INFO

Head Office: T/F  +961 5 430 574  | M  +961 3 977 280
Branch Office: T  +971 50 648 6812
training@saber-mena.com
www.saber-mena.com

# OVERVIEW

CPDF is a certification program for demand forecasters and planners working in supply chain industries, and endorsed by **The International Institute of Forecasters (IIF)**, whose purpose is to advance knowledge and research in forecasting.

The CPDF program is comprised of three levels:
**Level I - Basic,   Level II – Master, and   Level III – Pro.**

Each Level of the CPDF consists of both instructor-led workshop training hours, and independent hours to be accomplished through self-paced e-learning environment. The successful completion of each level will qualify participants to earn a certificate:

**CPDF Level I** - Forecasting Principles and Best Practices
**CPDF Level II** - Forecasting Methods and Performance Management
**CPDF Level III** – Certified Professional in Demand Forecasting (Pre-requisite Levels I & II)

The CPDF qualification will address multidimensional job roles in demand forecasting such as data display, database management, understanding quantitative and qualitative projection techniques, model creation and execution, forecast accuracy measurement, model and forecaster performance analysis, organization, and collaborative planning.

Interaction will be an integral part of the program.
Computer workshops will follow each topic for practical training.

1. Full attendance of hands-on workshops is required

2. Successful submission of required worksheets through e-learning system

3. CPDF is not a test-based program; it's a hands-on workshop

A laptop is required to run the computer exercises!

# TRAINER PROFILE

## HANS LEVENBACH | PhD

Dr. Hans is Founder and President of Delphus, Inc., which provides the PEER Planner Demand Forecasting and Replenishment Planning software solution for supply chain companies as well as hospital management organizations.

He began his career at AT&T Bell Laboratories as an applied statistician specializing in predictive analytics, forecaster training and developing decision support systems. After the breakup of the Bell System, he founded Delphus. He has taught statistics and forecasting courses at Columbia University as well as MBA Statistics at New York University.

Dr. Hans enjoys traveling and attending the annual International Symposium on Forecasting, where he gained much of the background for the most recent book. He is an elected Fellow, Past President, Treasurer of the International Institute of Forecasters (IIF), and served on the editorial board of FORESIGHT, the practitioner journal published by the IIF. He is also a member of APICS, INFORMS, American Statistical Association and elected member of the International Statistics Institute.

In collaboration with the International Institute of Forecasters, Dr. Hans has been instrumental in designing and constructing "Certified Professional in Demand Forecasting" (CPDF) curriculum for the professional certification of practitioners globally.

## Highlights

- Applied Statistician
- Associate Professor
- Founder & President

- Columbia University
- New York University

- AT&T Bell Laboratories
- Delphus Inc.
- IIF

Establish a framework for demand forecasting in the supply chain

Introduce a four-step process for streamlining the forecasting cycle

Define and visualize major demand forecasting techniques

Identify appropriate accuracy measures to evaluate demand forecasting and forecasting models

Complement non-traditional methods with proven approaches in forecasting model development
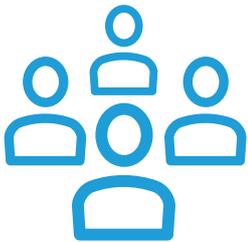
# WHO SHOULD ATTEND?

This program is directed to groups of members involved in planning, implementing and managing the company's functions:

- Demand Planners
- Supply Chain Managers
- Production Managers
- Financial Analysts
- Demand Forecasters
- Operations Managers
- Sales Managers
- Market Analysts

# Agenda

**Part 0 - Pre-course Computer Workshop**

**Part I - Demand Forecasting in the Supply Chain**
• What is demand forecasting?
• Demand Forecasting and the evolution of Supply Chain
• Who will use the forecast and what are their data needs?
• Forecasting as a structured process – The PEER Model

**Part II - Framing the Demand Forecasting Job**
• Data exploration – Learning from actual examples
• Judging the quality of data
• Handling unusual events and outliers
• What are forecasting models?
• Quantitative vs. Qualitative methods
• Evaluating forecasts and forecasting models
• Combining and reconciling the final forecast

**Part III - How To Use Components of a Time Series**
• Moving averages for smoothing kinks out of data
• Finding the lift in promotions with moving medians
• Identifying day-of-week effects through ANOVA methods
• Creating additive and multiplicative seasonal factors
• Seasonal adjustment of time series

**Part IV – Forecasting with Exponential Smoothing Models**
• Why use Naïve forecasting techniques?
• Types of smoothing weights
• Forecasting profiles for exponential smoothing
• Applying univariate time series techniques
• Handling special events with exponential smoothing models
• Scenario forecast
• Product lifecycle

**DAY 2**

**Part V – Measuring Forecast Accuracy**
• Basis of accuracy measurement: Bias and Precision
• Forecasting accuracy vs. forecasting errors
• Goodness of fit versus forecast performance
• Cost of inaccurate forecasts
• Waterfall charts and accuracy measurement

**Part VI – Tracking Tools**
• Ladder chart for monitoring forecast model results
• Prediction-Realization Diagram and the business cycle
• Prediction intervals for time series forecasts
• Cumulative tracking signals – Trigg's tracking signal

**Part VII - Practical Uses of the Forecast**
• Marketing – Promotion planning
• Sales– Pricing: Elasticities
• Operations – Safety stock and inventory forecasting
• Finance – Rolling forecasts

**Part VIII - Implementing a Forecasting Process**
• Successful Implementation Strategies
• Integration with Supply Chain
• Sales and Operations Planning (S&OP)
• Best-in-breed demand management

## Get the In-House Training Experience!

Customize this course for your team. Saber Academy programs can be tailored to your training needs to suit your business requirements and relevant industry challenges. This will surely give a greater impact on developing your teams' skills and executing customer-winning strategies.

We offer great training tools within a comprehensive capacity building program.

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