ADVANCED DEMAND PLANNING & FORECASTING FOR SUPPLY CHAIN OPTIMIZATION



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TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
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Introduction

Every supply chain decision how much to make, buy, hold, and move rests on an assumption about future demand. When that assumption is built on judgement alone, the whole chain absorbs the error through expediting, overtime, and write-offs. This Advanced Demand Planning & Forecasting for Supply Chain Optimization Training Course gives demand planners, supply chain analysts, and operations managers a complete method for producing forecasts that hold and plans that respond. Participants learn to analyse demand patterns, select and combine forecasting models, measure accuracy honestly, and translate forecasts into supply, inventory, and capacity plans. Furthermore, the course covers S&OP integration and the exceptions that demand daily attention.

Advanced Demand Planning & Forecasting for Supply Chain Optimization Course Objectives

- Identify demand patterns: stable, trend, seasonal, intermittent, and lumpy.
- Select forecasting methods to match each pattern rather than applying one model everywhere.
- Build forecasts using moving average, exponential smoothing, Holt's trend, and Holt-Winters seasonal models.
- Apply seasonal indices, deseasonalisation, and calendar adjustments.
- Measure accuracy with MAPE, MAD, RMSE, bias, and tracking signal.
- Apply Croston's method and period averaging for intermittent and lumpy demand.
- Combine statistical forecasts with sales intelligence into a consensus plan.
- Translate forecasts into inventory, supply, and capacity plans.
- Run the demand review step inside the sales and operations planning cycle.
- Manage exceptions: new products, promotions, phase-outs, and demand spikes.

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Course Methodology

- Facilitated sessions built on real demand histories and product portfolios.
- Spreadsheet drills comparing forecasting methods on the same demand series.
- Case workshops on forecast bias, intermittent demand, and promotion spikes.
- Simulation of a monthly demand review and consensus meeting.
- Group exercise on a demand planning improvement plan with accuracy targets.

Who Should Take This Course

- Demand planners and forecasting analysts.
- Supply chain and operations analysts.
- Inventory and replenishment planners.
- S&OP coordinators and process owners.
- Category and commercial managers contributing demand input.
- Finance analysts reviewing volume and revenue assumptions.

Advanced Demand Planning & Forecasting for Supply Chain Optimization Course Outlines

Day 1: Demand Analysis and Data Preparation

- Demand components: base, trend, seasonality, cycle, and randomness.
- Demand classification: stable, trend, seasonal, intermittent, and lumpy.
- Data cleaning: outliers, stockouts, and lost sales correction.
- Choosing the time bucket: daily, weekly, and monthly.
- Hierarchy planning across product, category, and location.

- Product lifecycle stages and their forecasting implications.
- Forecast horizon, review period, and planning calendar design.

Day 2: Forecasting Methods and Model Selection

- Naive, moving average, and weighted moving average methods.
- Simple and double exponential smoothing.
- Holt's linear trend method for trending demand.
- Holt-Winters seasonal models for seasonal demand.
- Croston's method and period averaging for intermittent demand.
- Regression and causal forecasting with demand drivers.
- Comparing methods on the same series and selecting by error.

Day 3: Forecast Accuracy and Consensus Planning

- Error measures: MAD, MAPE, RMSE, bias, and tracking signal.
- Forecast value added and measuring planner contribution.
- Setting accuracy targets by product class and volume.
- Combining statistical output with promotional and sales input.
- The demand review meeting: agenda, participants, and decision rules.
- Managing bias, optimism, and gaming in forecasts.
- Documenting assumptions and forecast versions.

Day 4: From Forecast to Inventory and Supply Plan

- Independent versus dependent demand and different planning logic.
- Safety stock from demand and lead time variability.
- Reorder point, min-max, and periodic review settings.

- Master production scheduling and capacity checks.
- Distribution requirements planning across the network.
- Service level targets and the cost trade-off behind each.
- Demand sensing and short-term adjustment practice.

Day 5: S&OP Integration, Exceptions, and Improvement

- The five-step S&OP cycle and where demand planning sits.
- Plan stability, frozen periods, and change control.
- Exception management: spikes, new items, and phase-outs.
- Promotions, events, and season planning in the forecast cycle.
- KPIs: forecast accuracy, bias, plan attainment, and service level.
- Reporting to management and the executive review.
- Building an annual demand planning improvement roadmap.

Conclusion

By successfully completing the Advanced Demand Planning & Forecasting for Supply Chain Optimization Training Course, participants will have acquired a thorough working knowledge of demand pattern analysis, forecasting model selection, accuracy measurement, consensus planning, safety stock and replenishment setting, S&OP integration, and exception management. They will leave able to raise forecast accuracy measurably, convert forecasts into plans that survive real variability, and report demand performance with credible figures. Gentex Training Center delivers this programme with demand and supply chain practitioners who run these planning cycles in live operations.

LEARN BOLD. **LEAD BEYOND**
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FAQs for the Advanced Demand Planning & Forecasting for Supply Chain Optimization course

Q1 What is the "Advanced Demand Planning & Forecasting for Supply Chain Optimization" course about?

It is a five-day programme on forecasting demand accurately and turning those forecasts into supply chain plans. It covers demand pattern analysis, forecasting model selection, accuracy measurement, consensus planning, inventory and capacity planning, S&OP integration, and exception management.

Q2 What are the key benefits of the "Advanced Demand Planning & Forecasting for Supply Chain Optimization" course?

Participants raise forecast accuracy measurably, cut both excess stock and shortages, and produce supply plans that absorb real demand variability instead of chasing it. They also gain a working consensus process and reporting that shows management where accuracy is actually improving.

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Q3 What skills will I gain from the "Advanced Demand Planning & Forecasting for Supply Chain Optimization" course?

You will gain demand pattern analysis and forecasting model selection, forecast accuracy measurement and consensus planning, safety stock and replenishment setting, and S&OP integration with exception and performance management.

Q4 What tools, methods, or standards are covered in the "Advanced Demand Planning & Forecasting for Supply Chain Optimization" course?

The course works with demand pattern classification, seasonal indices and deseasonalisation, moving average and weighted moving average methods, simple and double exponential smoothing, Holt's linear trend method, Holt-Winters seasonal models, Croston's method and period averaging for intermittent demand, regression and causal forecasting, error measures including MAD, MAPE, RMSE, bias and tracking signal, forecast value added, safety stock formulas, reorder point and min-max systems, master production scheduling and rough-cut capacity planning, distribution requirements planning, and the five-step S&OP cycle.

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Q5 How is the "Advanced Demand Planning & Forecasting for Supply Chain Optimization" course applied in real-world practice?

Teams apply it when rebuilding a SKU forecast, reviewing bias before the monthly demand meeting, resetting safety stock after a lead time change, planning stock for a promotion or seasonal peak, and deciding how to handle a new product launch. It also guides phase-out planning and accuracy reporting to management.