DEMAND FORECASTING & INVENTORY PLANNING



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TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
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Introduction

Forecasts are never right, yet every inventory decision depends on them. Order too much and cash sits on a shelf; order too little and customers go elsewhere. This Demand Forecasting & Inventory Planning Training Course gives planners, inventory analysts, and supply chain professionals a practical method to build forecasts that hold up and translate them into stock decisions that protect service at a controlled cost. Participants learn how to read demand patterns, select the right forecasting method for each pattern, measure forecast error honestly, and convert that error into safety stock and reorder rules. Furthermore, the course ties forecasting to inventory policy, so accuracy improvements actually show up in stock levels and fill rates.

Demand Forecasting & Inventory Planning Course Objectives

- Identify demand patterns: stable, trend, seasonal, intermittent, and lumpy.
- Select forecasting methods to match each pattern instead of applying one method everywhere.
- Build forecasts using moving average, exponential smoothing, Holt's trend method, and Holt-Winters seasonal models.
- Apply seasonal indices and deseasonalised demand for seasonal products.
- Improve accuracy using forecast error measurement: MAPE, MAD, bias, and tracking signal.
- Combine statistical forecasts with sales intelligence to form a consensus plan.
- Calculate safety stock from demand variability, lead time variability, and service level targets.
- Set reorder points, min-max levels, and review intervals for independent demand items.
- Apply ABC and XYZ classification to prioritise planning effort and control levels.
- Manage new product forecasts, promotions, and end-of-life phase-outs.

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Course Methodology

- Facilitated sessions built on daily demand series and real SKU histories.
- Spreadsheet drills comparing forecast methods and accuracy results on the same data.
- Case workshops on forecast bias, intermittent demand, and promotion spikes.
- Simulation of a monthly forecast review and consensus meeting.
- Group exercise on an inventory policy reset driven by forecast error.

Who Should Take This Course

- Demand planners and forecasting analysts.
- Inventory planners and stock controllers.
- Supply chain and S&OP coordinators.
- Category and replenishment managers.
- Procurement staff managing order cycles.
- Finance analysts reviewing inventory and working capital.

Demand Forecasting & Inventory Planning Course Outlines

Day 1: Demand Patterns and Data Preparation

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

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

Day 2: Forecasting Methods and Model Selection

- Naive and moving average methods and when they work.
- Simple and double exponential smoothing.
- Holt's linear trend method for trending demand.
- Holt-Winters seasonal models for seasonal demand.
- Croston's method for intermittent and lumpy demand.
- Analysing demand with regression and causal drivers.
- Comparing methods on the same series and choosing 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: Translating Forecasts into Inventory Policy

- Independent versus dependent demand and the different policy logic.
- Safety stock formulas using service level factor and demand variability.
- Lead time variability and its effect on buffer sizing.

- Reorder point and periodic review systems with worked examples.
- ABC and XYZ classification and control effort allocation.
- Min-max settings, order multiples, and supplier constraints.
- Multi-location planning and distribution requirements basics.

Day 5: Performance, Exception Management, and Review

- Inventory KPIs: turnover, days of supply, fill rate, and stockout rate.
- Forecast accuracy reporting and its link to excess and shortage.
- Exception management: large deviations, spikes, and new items.
- Promotion, season, and event planning in the forecast cycle.
- New product introduction and phase-out forecasting practice.
- S&OP integration and plan review cadence.
- Building an annual forecasting improvement roadmap.

Conclusion

By successfully completing the Demand Forecasting & Inventory Planning Training Course, participants will have acquired a thorough working knowledge of demand pattern analysis, forecasting method selection, error measurement, consensus planning, safety stock and reorder point calculation, and inventory policy design. They will leave able to raise forecast accuracy measurably, set stock levels that reflect real demand behaviour, and reduce both excess and shortage at the same time. Gentex Training Center delivers this programme with planning practitioners who run these forecast cycles in live operations.

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FAQs for the Demand Forecasting & Inventory Planning course

Q1 What is the "Demand Forecasting & Inventory Planning" course about?

It is a five-day programme on predicting demand and turning those predictions into stock decisions. It covers demand pattern analysis, forecasting method selection, error measurement, consensus planning, safety stock calculation, reorder point setting, and inventory policy design.

Q2 What are the key benefits of the "Demand Forecasting & Inventory Planning" course?

Participants raise forecast accuracy, cut both excess stock and stockouts, and set inventory buffers that match real demand variability. They also gain a working consensus forecast process and a clear link between accuracy improvement and working capital released.

Q3 What skills will I gain from the "Demand Forecasting & Inventory Planning" course?

You will gain demand pattern analysis and forecast method selection, forecast accuracy measurement and consensus planning, safety stock and reorder point calculation, and inventory policy design with ABC and XYZ classification control.

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Q4 What tools, methods, or standards are covered in the "Demand Forecasting & Inventory Planning" course?

The course works with moving average and exponential smoothing methods, Holt's trend and Holt-Winters seasonal models, Croston's method for intermittent demand, seasonal indices and deseasonalised demand, error measures including MAD, MAPE, RMSE and tracking signal, forecast value added, safety stock formulas with service level factors, reorder point and min-max systems, ABC and XYZ matrices, and S&OP demand review practice.

Q5 How is the "Demand Forecasting & Inventory Planning" course applied in real-world practice?

Teams apply it when rebuilding a SKU forecast, reviewing forecast bias before the monthly demand meeting, resetting safety stock after a lead time change, and planning stock for a promotion or seasonal peak. It also guides new product forecasts, phase-out planning, and replenishment parameter reviews.

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