



# Advanced Demand Forecasting E-learning Course



## Martec International

Martec International is a leading provider of data, industry knowledge and insight on retailers, consumer goods companies and other suppliers to retail, especially technology companies.

Our customers include:

- Retailers
- Consumer Goods companies
- Technology suppliers to retailers and consumer goods companies
- Marketing services companies that promote services to retailers and consumer goods companies
- Other service providers, such as logistics companies.

We help clients increase their industry knowledge, develop their skills and grow sales. Companies from approximately 38 countries across 6 continents come to Martec for assistance and insight.

## Target Audience

This program is designed for Senior Merchandisers, Senior Buyers, their managers, and other Supply Chain Managers. It will also benefit demand forecasters in consumer goods manufacturing and supply chain roles.

It is also relevant for consultants and vendors who supply forecasting systems, as well as internal IT teams involved in developing or implementing forecasting applications. It will also benefit companies who supply and implement demand forecasting solutions and retail staff who have project roles where demand forecasting knowledge is important.

## Objectives of the Suite

The course provides a thorough grounding in key forecasting principles and concepts. It is suitable for retailers operating in both category management and merchandise management environments. By the end of the program, students will be able to do the following:

By the end of this module you will be able to:

- Explain more advanced forecasting models, sometimes assisted by AI or machine learning, and identify when they are most useful
- Apply forecasting methods for direct to consumer operations, wholesale operations and to forecasting warehouse dispatches
- Describe ways to improve forecasting strategy..



## Course Overview

- Advanced Demand Forecasting is a self-paced web-based training program. The program provides about 2 hours of training. We recommend that students study in 30-40 minute segments to maximize learning retention.
- The program includes a variety of interest generating features and exercises. The student sees his or her own test scores immediately and can review explanations for the correct answers, as appropriate.
- Companies who buy a group of licences will be given access to the reporting facilities in the Learning Management System. This enables management to track which students have started and completed the training and their test scores.

There are three pricing options:

- Professional is suited to new joiners who will complete the complete training suite in a limited time. A professional licence is valid for 3 months.
- Performance Enhancer is valid for 12 months. This allows those who need to re-visit the classes periodically to refresh their knowledge to do so whenever necessary. It also includes access to the complete Retail and Consumer Goods Knowledge Bank also for 12 months

You can get a full explanation of the benefits and what is included in each option as explained in our [class pricing options](#) web page.

All a student needs to run the program is access to a PC and a web browser. The program is hosted on Martec International's Learning Management System and is available round the clock.

Companies may also purchase a corporate licence which provides unlimited access within the company's own organization. Prices are available on request.



# Program Contents

## Advanced forecasting Techniques

- Price Elasticity
- HALO and Cannibalization Effects
- Exponential Smoothing
- The Role of Smoothing Factors

## Forecast Refinement: Trend and Seasonality

- Trend Modifier
- Seasonality Factors
- ARIMA
- SARIMA
- SARIMAX

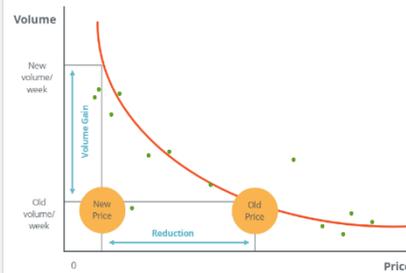
## Advanced Forecasting Profiles

- Forecasting Using Profiles
- Causal Methods
- Forecasting at Warehouse and Dispatch Level:
  - E-commerce and omni-channel operations
  - Manufacturer direct to consumer (DTC) operations
  - Wholesale demand forecasting
  - Where stores control their own replenishment re-ordering

## Forecasting Strategy and Application

- How to Respond if Forecast Accuracy is Poor
- The Importance of Demand vs. Sales
- Selecting the Most Appropriate Forecasting Model
- Additional Forecasting Considerations
  - DC level forecasting
  - Uplifts
  - Product lifecycle
  - Lumpy demand
- Forecasting Strategy – Category Management
- Forecasting and Allocation/Replenishment
- Forecasting Across the Supply Chain
- Mastery test

### Price Elasticity



**Price Elasticity**  
A price elasticity curve illustrates how changes in price are expected to affect sales volume

A significant price reduction may lead to a substantial increase in demand

**Price Inelastic**  
Products that show little change in sales even when prices are adjusted

Applying markdowns to price-inelastic products generally does not generate enough additional volume to justify the loss in margin

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### Forecasting Profiles

- ✓ New Product Profile
- ✓ New Product No Sales History
- ✓ Seasonal Profile
- Location Based Profiles
- External Factor Driven Profiles

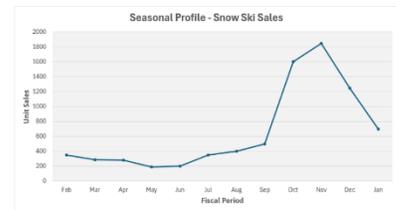
Seasonal items typically follow a distinct sales curve that is driven by time-based factors rather than steady, year-round demand

Demand is often concentrated within a limited selling window

Sales may peak shortly before a key usage event or activity

Related or complementary products often follow similar seasonal patterns

Outside the core season, demand usually falls away sharply



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### Gross Demand vs. Net Demand

**Reordering for e-commerce inventory must be based on net demand**

Returns forecasting for **seasonal items** is best done using **profile-based** approaches

For **continuity products** **time-series** based models or **profile-based** models can be used

Increasingly, e-commerce and omni-channel retailers are charging customers for returns

**Net Demand**

Represents demand after accounting for returns

- Returns increase on hand stock
- Online retail returns can reach up to 70% for individual items
- Average return rate for clothing is around 30% of total sales
- Stock loss can be incurred as items may be written off during the return inspection

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## Testing

At the end of each module there is a mastery test. If the learner completes this test with a pass mark of 70% or more and also completes our short class survey, they will be issued with a certificate.

## Delivery Options

This program can be delivered in two ways:

- Individuals or companies can order the program for one or more people via the Martec International web site at [www.martec-international.com](http://www.martec-international.com).
- If a company wants to train batches of students, the e-learning program can be studied to a group time schedule and live web-based instructor-led sessions can be provided to allow for interaction with a subject matter expert. There is an extra charge for this for smaller size groups.

Further information and pricing can be provided on request.

## More Information

You can learn more about Martec at the following locations:

<https://www.martec-international.com>

Our YouTube channel at <https://www.youtube.com/channel/UCy9AbJlSWOIOJitqjqWZsDA>.

If you have an enquiry you would like to make of Martec, you can use the Enquire Further button on <https://www.martec-international.com/contact-us> or call +44 1823 333469.