IIMM CORPORATE TRAINING PROGRAMMES FOR SCM PROFESSIONALS

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
VADODARA

IN PURSUIT OF EXCELLENCE IN SUPPLY CHAIN MANAGEMENT

ABOUT IIMM

- **IIMM Vadodara Branch** offers following training modules which facilitates a wide spectrum of professionals engaged in various facets of Materials Management, responsible for planning, sourcing, logistics and Supply Chain Management. The training modules mentioned below provides a good insight of data understanding, presentation and analysis which will help in greater productivity of the organization. These courses emphasize to leverage data analysis and data analytics tools to augment performance, automate planning and ability to continually sense and respond to business demands. The details of the training sessions will be provided in details and the scope can be fixed as per the duration of the training. The hands-on training comprises of the real case studies and corporate examples. Our goal is to help you estimate the value created using data to address an opportunity.
- The outlines of the courses are mentioned below for reference, the scope can be decided as per the number of hours/ days of Training.
- Our faculties focus is to share the experience earned from working experience in Projects & Operating plants with each topic and make the session interactive.
- It has been our policy that Professional bondage with participants doesn't end at the completion of the one day session but that bond remains true for all time to come. Points raised by the participants will be addressed on same day but thereafter also participants will have right to contact us either on mail or phone for any clarifications & same will be attended by us without any financial implications.

Module	Topics
1	Materials Planning and Inventory Management
2	Procurement and Contract (P & C) Management
3	Project Procurement
4	Negotiation Skills
5	Spare Parts Management
6	Logistics and Stores Management
7	SCM for Non SCM Professionals
8	Soft Skills & IT Applications in SCM Functions
9	Emerging Technologies in SCM – Block Chain Machine Learning & Big Data in SCM
10	Develop MS-Excel Skills to improve Supply Chain & Business Performance
11	Improving Supply Chains / Business processes with Data Visualization Tools and Techniques
12	Supply Chain Planning and Analysis / Business Analytics
13	Digital Business and Emerging Trends in Supply Chain Management & Logistics
14	Python Programming Language for Beginners – Industry Perspective

Module – 1
Materials Planning & Inventory Management

- Importance, Definition & Inventory Classification
- Service Level, Inventory turn -over ration & its impact on Profitability
- Importance of lead time in inventory control
- Codification, Standardization & Variety reduction
- Material Requirement planning (MRP)
- Costs associated with Inventory (Ordering & Inventory Carrying Costs)
- How to use different Selective inventory control techniques namely - ABC, XYZ , HML , FSN , VED , PQR , SOS & GOLF
- How much to order & when to order (EOQ & ROL Concept)
- How to Fix Inventory Control levels (Min& Maximum Stock control levels)
- Use of XYZ analysis in handling disposal of Non-moving & Project Surplus inventory.
- Discussion on Spare parts classification & their indenting system.
- Modern Concept (Pooling of Resources, JIT & Zero Inventory Concept)
- Use of Vendor Managed Inventory (VMI) Concept
- Use of GHEMBA Concept
- Emerging role of IT in Inventory Management
- Discussions on MIS
- Discussions on Take away points for improvement process

Who Should Attend: This is useful for Executives working in Inventory cell, Stores, Purchase, Maintenance, Finance & Audit departments.

Duration of Course: Six sessions of 1.5 hours each.

Module – 2
Procurement & Contract Management

- Objectives of Procurement & Contract and its impact on Profitability
- Business Cycle of Procurement Management
- Business Cycle of Contract Management
- Procurement & Contract Budget Preparation & Finalization
- Vendor Selection & Vendor Management
- Supplier Base Optimization
- Techno Commercial Evaluation
- Negotiation
- Best Procurement & Contract Practices
- Global Sourcing
- Importance of INCO terms
- Use of IT in Procurement & Contract Services
- Public Buying
- Purchase Order & Service Order Execution & Closure
- Benefits of Collaboration
- Make or Buy Strategy
- Emergency Procurement

Who Should Attend: This is useful for Executives working in Purchase & Contracts, Inventory cell, Finance & Audit departments.

Duration of Course: Four sessions of 1.5 hours each

Module – 3
Project Procurement

- Importance of Project Management & It's impact on profitability of Project
- Understanding of EPC Model.
- Interdependencies in Project Management.
- Schedule and Cost Control - Planning.
- Critical Success Factors for Project success.
- Budgeting and Project Scheduling.
- RFI / RFP / RFQ /RFT.
- Process of Vendor Management – Identification, Evaluation, Selection.
- Vendor Discussions and Selection – Dos & Don't.
- Evaluation Basis – Delivery, Taxes, Risk, Post sale support
- Process of Project Procurement. (RFQ – Offer – Technical Recommendation – Technical Bid Analysis – Commercial Assessment – Price Comparison)
- Internal Cost Assessment and Price Confidentiality.
- Critical Commercial Terms - GTC, SPC - Cost, Delivery- Schedule Assessment.
- Negotiation.
- Budget – Cost, Delivery- Schedule Assessment.
- Concept of Total Cost of Ownership – Life Cycle Cost.

- Post Order Vendor coordination – Expediting, Documentation, Payment, After Sales Support. Why Global Procurement.
- International Vendors- Culture, Etiquette, Standards, Documentation.
- Inco terms Basic Understanding.
- Package Items Evaluation – Supply & Erection.
- Milestone based Payment linkage.
- Sub Vendor selection and expediting, Drawing, Documentation.
- Change Orders – Schedule, Cost, Scope.
- Logistics, Dispatch Documentation, Payment Terms.

Who Should Attend: This is useful for Executives working in Project Procurement & Contracts, Project Management & Execution team members, Project Finance & Audit departments.

Duration of Course: Six sessions of 1.5 hours each.

Module - 4
Negotiation Skills

- Introduction & Importance of Topic.
- What are our Business Core needs & how to achieve?
- Define Negotiation.
- Why Negotiation?
- When to Negotiate & Who should negotiate?
- Types on Negotiation.
- Types of Negotiators (Soft OR Hard negotiator).
- Planning to Negotiate to get required success. Use ‘3P ‘ Approach.
- Discuss with examples on Negotiation Skills.
- Negotiation Goals.
- Negotiation Strategies.
- Types & Stages of Negotiations.
- Concluding of Negotiations.
- Record note of Concluded Negotiations.

Who Should Attend: This is useful for Executives dealing in finalization of Purchase Orders, Works Contracts, Finance & Audit departments.

Duration of Course: Four sessions of 1.5 hours each.

Module - 5
Spare Parts Management

- Objectives of Spare Parts Management.
- What exactly is Master Data and how to gather and maintain it.
- Spare parts classification best practices.
- Discuss on important stages in the life cycle of spare parts.
- Determining spare part criticality based on risk.
- Define Insurance spares and it's Stocking level & Storage system.
- Indenting &Stocking decisions of Consumable Spares.
- What care to be taken at the stage of ordering Capital equipment with Commissioning spares.
- How to reduce dependence on Original equipment manufacturer.
- How to achieve best interface with Maintenance department.
- Vendor relationships.
- What are the KPIs to be measured?
- Optimizing the inventory
- Review of Non moving Spares, Disposal, Inventory Optimization.

Who Should Attend: This is useful for Executives dealing in Spare parts Purchase, Inventory, Stores, Maintenance Finance & Audit departments.

Duration of Course: Four sessions of 1.5 hours each

Module - 6
Logistics & Stores Management

- Objectives of Logistics & Stores function& it's impact on Profitability
- How to reduce & bring control on Logistics & Storage cost
- Discuss on Supply Chain execution system (SCES)
- Stores management concepts & Strategies
- Factors to be considered in Stores Layout / Design. • Principles of Stores design
- Discuss on each function of Stores
- Payment of accepted Materials
- Emerging role of automated storage systems
- Preservation & Prevention of deterioration in storage
- Door delivery system. • Issue & Utilization of Materials
- Stores accounting. • Cycle counting
- Return of Unused Materials. • Disposal of Scrap & Surplus inventory
- Project Stores management best practices
- How to implement best Safety / Security & Quality Systems in Stores

Who Should Attend: This is useful for Executives working in Logistics, Stores, Maintenance, Finance & Audit departments.

Duration of Course: Four sessions of 1.5 hours each.

Module -7:
SCM For Non SCM Professionals

- Importance of Non SCM professionals in SCM Functional area.
- Importance of Materials Planning & Inventory Management
- Costs associated with Inventory (Ordering Cost, Inventory Carrying Cost)
- Inventory Control techniques (ABC, XYZ ,VED ,PQR , HML,SOS,GOLF)
- Discuss on Unique codification system, Non-moving & Project surplus inventory
- Economic Order Quantity Concept (EOQ) and how to use in our Business
- Fixation of Inventory Control levels (ROL, Minimum & Maximum stock levels)
- How Non SCM professionals can help in Procurement & Contract function.
- How Non SCM professionals can help in Storage Function
- How Non SCM professionals can help in disposal of Scrap & Surplus inventory

Who Should Attend: This is useful for all Executives working in Non SCM function particularly Production / Maintenance / Quality Control / Safety / Finance & Audit departments.

Duration of Course: Four sessions of 1.5 hours each.

Module - 8
Soft Skills & IT applications in SCM Function.

- Effective Communication Skills
- Assertive Skills
- Inter Personal / Work Place Communication Skills
- Presentation Skills
- Managerial Skills
- Virtual Meetings, Webinar, E-mail & Internet Etiquettes
- Dealing with Vendors, Colleagues & Senior executives.
- To inculcate various soft skills needed in SCM function

Who Should Attend:

This is useful for all Executives working in SCM function, Finance & Audit departments.

Duration of Course:

Four sessions of 1.5 hours each

Module - 9
Emerging Technologies in SCM
Introduction to
Cloud Computing, IOT, Blockchain, Machine Learning and Big Data in SCM

Information technology has evolved over the past five decades in response to the need for more efficient techniques to manage the significantly increased volume and sophistication of the knowledge reservoir of the mankind. This training aims to provide the introduction to the latest Information technologies such as Big Data, Cloud Computing, Blockchain, IOT and more in order to understand their applications in an enterprise.

- **PO Block chains in SCM**

i) Basics of blockchain technology (distributed ledger, smart contracts, P2P network, and immutability)
ii) Learn how supply chains can benefit from blockchain technology and explore future applications of blockchains in SCM
iii) Review existing cases where blockchains are in use for SCM
iv) (Walmart, Tradelens) Case study: BeefChain: Blockchain and the dynamics of traceability, quality, and value capture in the Beef Industry (HBSP case)

- **Machine Learning (ML) and Big data in SCM - Supply chain analytics**

i) Learn how ML models can help analyze trends, spot anomalies and derive predictive insights for supply chain operations using massive datasets
- What does Industry 4.0 mean to Supply Chain Management?
- Digitization (and servitization) of supply chains

Who Should Attend: This is useful for all Executives working in SCM function, Finance & Audit departments.
Duration of Course: Four sessions of 1.5 hours each.

Module - 10
Develop MS-Excel Skills to Improve Supply Chain Performance/ Business Performance.

Excel abilities are useful in many areas of business, and in the supply chain, excel is used for data evaluation, calculations, inventory tracking, demand planning, scheduling, and many other functions. For the supply chain professional, Excel abilities are a must-have for breaking down large or complex tasks into smaller bite- sized pieces. Excel is a worldwide tool that many companies use on daily basis. Excel is highly flexible and excel is a real career accelerator, especially in Supply Chain. This course is also recommended for Finance professionals, HR professionals and other executives in an organization.

Introduction to Excel (Outline of the course contents)

- **Using Basic Functions** – sum, average , min, max, count etc.
- **Formatting and Proofing**–Number, font, alignment, border
- **Mathematical Functions** – sumif, sumifs, countif, countifs, averageif, averageifs
- **Protecting Files**- File level protection, workbook, worksheet.
- **Date and Time Functions**- Today, now, day, dateif, dateadd, EOMonth, weekday etc.
- **Printing Workbook** – Setting up print area, Designing a structure of a template, print Titles – Repeat Row/ columns

Advanced Excel

- **What if Analysis** – Goal Seek, Data table (PMT Function), Solver Tool
- **Logical Functions** – if, nested ifs, complex if and or functions
- **Data Validation**–Manage primary and secondary axis, dynamic dropdown list creation using data validation
- **Lookup Functions** – Vlookup. Hlookup, index and match, nested vlookup, reverse lookup using choose function, worksheet linking using indirect vlookup with helper merger
- **Pivot Tables** – Creating Pivot Table, Advanced value field settings, grouping based on number and dates, calculated fields and calculated items, array functions, using array formulas, array with lookup functions
- **Chart and Slicers** – Bar chart, Pie chart, Line chart etc., Filter data using slicers, manage primary and secondary axis, Excel Dashboard, planning a dashboard, adding tables and charts to dashboard, Adding dynamic contents to dashboard.
- **VBA Macros**
- **Introduction to VBA** – Recording a Macro, Procedures and Functions in VBA
- **Variables in VBA** – What is a variable, using non-declared variables, variable data types, using constant variables.
- **Message box and Input box function** – customizing message and input box, introduction to VBA

Module 11
Improving Supply Chains, Business Processes with Data Visualization Tools and Techniques

- A supply chain is defined as a system or a network of people, information, resources, organization, or activities which are involved in making sure that a product reaches the client or customer from the supplier. The modern supply chain has reached a new level with the introduction of IoT, AI, and machine learning. It has become data-oriented. The digital transformation that is taking place has changed the way supply chain works. To improve delivery, accuracy and reduce costs, the supply chain has become more of a data-oriented process. In any business involving the delivery of a product from one point to another, there are possibilities where the delivery may not be on time, or the product is not in stock. Data visualization is something that can help a business to point out where the issue is generated from within the supply chain and will help you counter the same.
- With an explosion in data analysis and data visualization tools over the past few years, there is an increased recognition that effectively visualizing data is important to anyone who works with and analyses data. This training explains the use of MS-Excel / Python for data visualization explaining with the help of the real-world examples. The training emphasizes that if you are an Excel user, the default chart types in do not need to limit your data visualization capabilities; extending the tool to create other chart types for effective visualization is indeed possible. Matplotlib and seaborn visualization libraries will be used for data visualization in python.

The outline of the course contents is –

- An introduction to how to design basic information visualizations
- What makes a good information visualization
- How to apply a range of basic and complex information visualization techniques
- How the eye and the brain function together to deliver imagery, and how it affects information visualization design
- How to avoid the common problems of visual perception in your designs
- How to evaluate the effectiveness of an information visualization
- The importance of context to choose an effective visual
- Basic Data visualization Principles
- Comparative analysis of charts
- Understanding the insights
- Sentiment analysis charts
- Specialized survey charts
- General Analysis Charts
- Customer journey charts

Module 12
Supply Chain Planning and Analysis / Business Analytics

- This course explores development of plans for executing supply chain processes to support integration of the supply chain across major functional areas of the business including logistics, marketing, manufacturing, and procurement. To facilitate achievement of these objectives, the course introduces analytical tools and techniques that provide a cause and effect understanding linking operational plans with corporate objectives.
- Business Analytics refers to the ways in which organization can use data to gain insights and make better operations decisions. Business analytics being an integral part of modern management, this training course focuses on optimizing complex decisions, machine learning techniques and integration of technique.
- The training covers the basic analytics methods and analysis of the case studies of organizations that successfully deployed these techniques as well as develop critical thinking about data and the analysis.

The outline of the course contents is

- Introduction to Data, Information, knowledge and wisdom
- Structured, unstructured, semi-structured, qualitative and quantitative data
- How to manage Data
- Business view of Information Technology applications
- Definition and examples of Business Intelligence (BI)
- Introduction to Data Mining, Machine Learning and Data Science
- MIS, DIS, EIS and Digital Dashboards
- Resource Considerations to support Business Analytics
- Introduction to OLAP, OLTP
- Data Warehousing
- Descriptive, Predictive, Prescriptive and Diagnostic Analysis
- Business Analytics in Practice – HR Analytics, Financial and Fraud Analysis, Marketing Analysis, Supply Chain Analytics, Healthcare Analytics

Module - 13
Digital Business and Emerging Trends in Supply Chain Management and Logistics

- Information technology has evolved over the past five decades in response to the need for more efficient techniques to manage the significantly increased volume and sophistication of the knowledge reservoir of the mankind. This training introduces participants to information management strategies and tools to manage integrated supply chains. This includes information technology systems used to support modern supply chains and exposure to the supply chain digitization transition. This training aims to provide the introduction to the latest Information technologies such as Big Data, Cloud Computing, Blockchain, IOT and more in order to understand how information and technology can best support effective supply chain management. The course will also review reverse logistics technology and services. Focus areas will include discussions on RFID technology, EDI messaging and how the Cloud can be used in supply chain services. E-commerce solutions and emerging trends will also be reviewed in this course.

The outline of the course contents is –

- Introduction to Digital Business
- Types of Digital Business and related industries
- Digital Business Technologies
- Online Market places
- Types of Online Business Markets
- Online Business models and frame work for analyzing them
- Digital Business Management – EAI, CRM, SCM
- Organizational structure and Digital Business
- RFID technology, EDI messaging
- Cloud Computing in supply chain services
- E-commerce solutions and emerging trends
- Introduction to Big Data, IOT and Blockchain
- Digital Business – The Future

Module - 14
Python Programming Language for Beginners – Industry Perspective

In today's industry, Python programming is widely used for Big Data, Internet of Things, Geographical information, basic mathematical functions in school, university projects and etc. This python learning course is framed in accordance with the industry specific people. It covers all the latest topics from Basics to advanced level like python for Machine learning, Data Science, Data Visualization etc.

The outline of the course contents is –

- **The Context of Software Development** -Software, Learning Programming with Python
- **Values and Variables** - Integer and String Values, Identifiers, User Input, String Formatting
- **Expressions and Arithmetic** – Expressions, Arithmetic Examples
- **Conditional Statements** - Boolean expressions, If/Else statement, Other Conditional Expressions
- **Iteration** – Loops
- **Using Functions** - Introduction to Using Functions, Functions and Modules
- **Writing Functions -1** - Function Basics, Parameter Passing, Custom Functions vs Standard Functions, Refactoring
- **Writing Functions -2** - Global Variables, Making Functions Reusable, Functions as Data
- **Objects** - Using Objects, String, File Objects
- **Lists** - Using Lists, Building Lists , List Traversal
- **Tuples, Dictionaries, and Sets** - Storing Aggregate Data, Enumerating the Elements of a Data Structure
- **Class Design** - Composition and Inheritance