

# MODULE CONTENTS FOR THE PROFESSIONAL DIPLOMA IN LOGISTICS & TRANSPORT

To achieve the Professional Diploma, the learner is required to demonstrate competence in the following areas:

- (1) 1 x Core Management Module (Compulsory)
- (2) 1 x Supply Chain Management Module (Compulsory)
- (3) 2 x Technical Options/Electives, to include any two (2) from the following:-
  - Inventory Planning
  - Warehouse Planning
  - Production Planning,
  - Sourcing/Procurement
  - International Business,
  - Movement of Goods (Transport)
  - Retail Supply Chain Logistics
  - Supply Chain Network Planning
  - Supply Chain Flow Planning

## CONTENTS OF EACH MODULE

MODULE TOPIC DETAILS OF EACH COURSE ARE AS FOLLOWS:-

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### CORE MANAGEMENT (COMPULSORY MODULE)

#### INTERNAL ORGANISATION DYNAMICS

- Internal dynamics of an organisation
- How an organisation works
- Subsidiary activities
- Typical management patterns
- Elements of planning and control systems
- Identifying the importance of change in an organisation
- Factors that can motivate change
- Implementing change
- The meaning, quality and purpose of information
- Information systems
- Outlining information collection processes
- Evaluating derived information

#### EXTERNAL DYNAMICS

- Market orientation
- The marketing mix
- The relationship between demand, supply and price
- The contribution to competitiveness of logistics thinking
- Defining and evaluating the trade-off
- Identifying the main sources of UK & European Union law
- Liabilities of employers for actions of employees and agents
- Liabilities of operators in tort
- Identifying the elements of a legal contract
- The main elements of agency law
- Relationships between contractors and sub-contractors
- Requirements for a contract of carriage
- Outlining the ways in which business entities may cease to trade

- Analysing the impact on operations of legislation
- Defining sustainability from a logistics context
- Analysing impact of operations on external features

## PEOPLE MANAGEMENT

- Contributing to recruiting procedures
- Staff selection methods
- The importance of staff development
- The development process
- Team creation and building techniques
- Identifying the roles of trade associations
- The main aspects of UK law governing membership of a Trade Union
- The legal control over industrial action
- The principal employee rights as guaranteed by current employment legislation
- Explaining the accepted codes of practice for dealing with employment matters
- The requirements for termination of employment by dismissal
- The operation of Industrial Tribunals
- The operation of the legislation on redundancy
- Outlining the requirements on the transfer of undertakings
- The rights and duties of employers and employees in respect of discrimination at work
- The rights and duties of employers and employees in respect of the principal health and safety at work legislation
- Health and safety legislation currently in operation in the UK
- Agencies charged with administration and enforcement of health & safety legislation

## THE BUSINESS PLAN

- The structure and process of a business plan
- Identifying the main sources of business funding
- The management of working capital
- The methods of asset acquisition
- The main accounting records
- Defining the use of the principal accounting ratios
- The need and methods of credit control

- The methods of revenue expenditure
- The components of the commercial transaction process
- Statutory deductions for employees
- Terminology used in budget techniques
- The principal and major types of budgets
- The process of budget formation
- The concepts of performance appraisal
- Performance monitoring process
- Distinguishing between performance measures
- Financial analytical tools
- Evaluating financial asset purchase comparisons
- Optimum asset replacement timings

## SUPPLY CHAIN MANAGEMENT (COMPULSORY MODULE)

### WHAT IS THE SUPPLY CHAIN?

- Supply chain participants
- Supply chain flows
- Supply chain definition
- Scope of supply chain activity
- Effective and efficient activity

### WHY IS THE SUPPLY CHAIN IMPORTANT?

- Using the supply chain as a competitive tool
- Using the supply chain to support marketing
- The competitive framework
- The financial impact of the supply chain

### HOW THE SUPPLY CHAIN WORKS – SUPPLY CHAIN PROCESS

- Sub processes
- Decoupling points
- Lead time
- Cost to serve

### HOW THE SUPPLY CHAIN WORKS – MATERIAL FLOW

- Forecast gap
- Forecast error
- Product structure
- Uncertainty – inventory
- Cost and added value
- Demand amplification

## **FLOW BARRIERS**

- Understand the supply chain process
- Improve communication
- Breakdown functional barriers
- Build trust
- Reduce the impact of inaccurate forecasts
- Balance supply and demand

## **HOW TO IMPROVE SUPPLY CHAINS**

- Supply chain performance metrics
- Supply chain toolkit
- The improvement journey

## **SUPPLY CHAIN PERFORMANCE DRIVERS - ACHIEVING STRATEGIC FIT AND SCOPE**

- Competitive strategy
- Strategic links
- Achieving strategic fit

## **SUPPLY CHAIN DRIVERS AND OBSTACLES**

- Supply chain decision making framework

## **SUPPLY CHAIN DRIVER: TRANSPORT**

- Factors affecting transport decisions
- Performance characteristics of transport modes
- Design options for transport networks
- Trade-offs in transport design
- Tailored transport
- Routing and scheduling

## **SUPPLY CHAIN DRIVER: FACILITIES**

- Factors affecting facility decisions

- Framework for network design decisions
- Models for facility location
- Warehouse design

### **SUPPLY CHAIN DRIVER: INVENTORY**

- Framework of inventory decisions
- Managing demand
- Managing uncertainty – safety inventory
- Managing cycle inventory
- Managing seasonal inventories

### **SUPPLY CHAIN DRIVER: INFORMATION**

- Importance of information in the supply chain
- Information technology – the enabler
- Analytical applications
- Impact of e-business on supply chain performance

### **SUPPLY CHAIN COORDINATION**

- Effect of lack of coordination
- Obstacles to coordination
- Managerial levers for coordination

## **OPTION UNIT – INVENTORY PLANNING**

### **WHAT IS INVENTORY MANAGEMENT**

- Inventory within the supply chain
- Different types of inventory and the cost of holding stock
- The implications of the "shrinking service window"

### **BASIC INVENTORY PRINCIPLES**

- Principles of the fixed period and fixed quantity models
- Impact of service levels and lead times on reorder levels
- Different types of order quantity models
- Limitations Of order quantity models and their relevance to modern systems

### **MODERN INVENTORY SYSTEMS**

- The development Of modern inventory techniques

- Benefits of "dynamic" stockholding models incorporating demand forecasts, tracking signals and seasonality factors
- Different types of systems currently used by companies
- The problems in developing and maintaining current systems

## MANAGING INVENTORY THROUGH A NETWORK

- How to organise inventory within a supply chain
- Advantages and disadvantages of distribution requirements planning
- How current initiatives enable minimisation of stock within a network

## OPTION UNIT – PRODUCTION PLANNING

### CONCEPTS OF PRODUCTION PLANNING

- Basic concepts
- Sales planning and forecasting

### FUNDAMENTALS OF PRODUCTION PLANNING

- Master scheduling
- Material planning and capacity management

### CURRENT MANUFACTURING AND MATERIALS PLANNING SYSTEMS

- Manufacturing planning and control systems
- The impact of globalisation on production planning
- The new manufacturing environment

### MONITORING AND IMPROVING PERFORMANCE

- The need for performance measures
- Customer service performance measures

## OPTION UNIT – WAREHOUSE PLANNING

### THE ROLE OF THE WAREHOUSE IN LOGISTICS STRATEGY

- Warehouse logistics strategy
- Warehouse strategy options
- Warehouse impact on customer service

### WAREHOUSE OPERATIONAL PROCEDURES AND PROCESSES

- The role of warehouse management
- Warehouse resource requirements
- Product characteristics and requirements
- Basic concepts of inventory control
- Legislation applicable to a warehouse

## TECHNOLOGY IN THE WAREHOUSE

- Warehouse interfacing with the rest of the supply chain
- Warehouse interfacing with the customer
- The technology available to support the warehouse physical operation
- The technology available to support the management of the warehouse
- Data transfer systems integration with warehouse equipment

## WAREHOUSE COST MANAGEMENT AND PERFORMANCE CONTROLS

- Setting standards and performance indicators
- Managing a warehouse using standards and benchmarks
- Managing the cost of warehouse operations
- Recognising and managing trends
- Dealing with emergencies

## OPTION UNIT – INTERNATIONAL BUSINESS

### THE INTERNATIONAL BUSINESS ENVIRONMENT

- The concept and organisation of international trade
- External or “uncontrollable” influences that impact on an organisation’s international business strategy
- Internal or “controllable” influences that impact on an organisation’s international business performance and supply chain strategy
- Recognising and managing the potential operational and financial risks inherent in an international supply chain.

### DEVELOPING A GLOBAL LOGISTICS STRATEGY

- Understanding and integrating the aims and objectives of the various participants in an international supply chain
- Global logistics network design and facility location
- Designing the information system required to support and manage global activity
- Developing a plan for overcoming supply chain problems and network interruption



- Crisis management in an international business environment

## GLOBAL LOGISTICS OPERATIONS AND FACILITIES

- Developing a monitoring and control strategy for an international supply chain
- The scope and characteristics of the different international transport modes and facilities
- Principal regulations and contracts associated with international commerce and trade
- The role and impact of customs and excise on global supply chains and logistics processes

## INTERNATIONAL COMMERCE

- Office organisation and administrative structure
- Contractual considerations & contract law
- The importance of documentation in international commerce and trade
- Electronic commerce
- Cargo insurance
- Selling price, payment methods and finance
- The role of credit insurance

## OPTION UNIT – SOURCING / PROCUREMENT

### THE ROLE OF SOURCING AND PROCUREMENT

- Sourcing and procurement In the supply chain
- Corporate sourcing strategy
- Corporate sourcing and logistics strategy
- Sourcing and supply activities

### SOURCING AND PROCUREMENT PROCEDURES AND PROCESSES

- Sourcing structures
- The sourcing process
- Developing prices and pricing strategies
- Supplier accounts
- Legal issues of contracts and disputes

### MANAGING RISK AND SPEND IN RELATION TO CUSTOMER AND SUPPLIER REQUIREMENTS

- Managing risk

- Supplier relationships
- Opportunities to manage suppliers
- Planning and directing negotiations
- Controlling negotiated outcomes

## PERFORMANCE MEASUREMENT IN SOURCING AND SUPPLY

- Measuring suppliers
- Measuring sourcing processes
- Benchmarking performance

## OPTION UNIT – MOVEMENT OF GOODS (TRANSPORT)

### GOODS TO BE MOVED

- Goods characteristics
- Safety and security of goods
- Unitisation methods
- Factors influencing goods flows

### ORIGINS, DESTINATIONS AND ROUTES

- Sources and destinations of goods
- Impact of collection and delivery site
- Third party involvement
- Basic concepts of route planning and scheduling

### MODES OF TRANSPORT

- Suitability of modes
- Features of the modes of transport
- The modal nodes
- Intra and inter modal techniques and practices

### MOVEMENTS

- Types of movements and their resource requirements
- Safety and security
- Planning movements
- Information exchange

## LOGISTICS AND THE SUPPLY CHAIN

- Logistics principles
- Components of the supply chain
- Basic SCM techniques
- Quality management and SCM performance monitoring

## OPTION UNIT – RETAIL SUPPLY CHAIN

### INTRODUCTION TO THE RETAIL MARKET

- Customer buying patterns – nationally and globally
- The nature of the retail market and its current segmentation
- The determinants of change and retail power in the supply chain
- The impact of change on retail logistics

### RETAIL STRATEGY AND NETWORKS

- The underlying principles of retail strategies for the perspective of the retailer and the buyer
- Partnerships within retail logistics strategy
- Basic principles and organisation of retail networks
- The information systems suitable for retail network management

### INVENTORY & WAREHOUSE ISSUES

- The fundamental issues underpinning various inventory management systems
- Warehousing systems
- The benefits and limitations of data detection, collection and transfer systems

### GLOBALISATION & THE RETAIL SUPPLY CHAIN

- Available sourcing solutions
- The nature and impact of globalisation on retail supply chains

### E RETAILING

- E-retailing strategies
- Market trends and obstructions to the development of e-retailing channels
- Specific distribution requirements of e-retailing
- How to manage partnerships in e-retailing

## OPTION UNIT – SUPPLY CHAIN NETWORK PLANNING

### IDENTIFY NETWORK REQUIREMENTS

- Various types of network requirements and how they relate to supply chain strategy
- Issues involved in forecasting network throughputs, currently and in the future
- The process to interpret supply chain audit findings
- Factors in recognising improvement signals that have network implications

### PLAN THE NETWORK STRUCTURE

- Factors that determine a supply chain network structure
- Features of facility location planning
- Various features for locating major supply chain facilities
- Elements of planning to develop an existing network structure into a new one

### RESOURCE THE NETWORK

- Factors to consider in specifying resource requirements
- Different sources of resource supply available
- Factors to consider when selecting sources of resource supply

### CREATE THE NETWORK CONTROLS

- Identify and specify the requirements for information to support the network
- Specify the measurements to monitor the network performance
- Establish service level agreements between supply chain players to support the network

### COST PROPOSALS

- Factors to be considered when identifying network costs and service benefits
- Preparing and testing the robustness of financial appraisals
- Key steps in preparing and presenting proposals

## OPTION UNIT – SUPPLY CHAIN FLOW PLANNING

### DEMAND PLANNING

- Calculating a consensus forecast with cross functional components

- Understanding various forecasting techniques
- Understanding the impact of a variety of demand features on a forecast
- Understanding how different policies and activities can shift demand

## SUPPLY MANAGEMENT

- The segmentation factors determining supply chain combinations
- The supply chain strategic requirements and their evaluation
- Configuring supply chains to obtain strategic fit
- How different definitions of time impact on supply chain activity
- Using cross functional components to determine supply requirements

## INVENTORY PLANNING

- Understanding the impact of a variety of demand features on a forecast
- Factors affecting the positioning of inventory within the supply chain
- Development of rules to manage inventory at each stock point
- Parameters involved in safety stock calculation
- Various systems for managing inventory levels

## SUPPLY CHAIN PLANNING

- Understanding the impact of a variety of demand features on a forecast
- Factors involved in sales and operations planning to balance supply and demand
- The determination of aggregated demand to assess supply requirements by location
- 'What if' analysis to develop plan sensibilities

## COLLABORATION

- Understanding the impact of a variety of demand features on a forecast
- Selection of appropriate partners for supply chain collaboration
- Quantification of benefits accruing from collaborative relationships
- Use of cross functional processes to progress collaborative relationships.