

# LOGISTICS AND MULTI-MODAL TRANSPORT – Syllabus

*Note. This syllabus covers the interrelationship of all modes of transport used in international trade. However, students should note that because 90% of all international cargo transport includes a sea movement leg, the main thrust of this syllabus is on intermodal transport and logistics involving maritime transport on at least one leg. It is assumed that the systems used for supply chain management, associated logistics and inventory control are all computer-based and that students will be familiar with the fundamentals of the internet and basic e-commerce.*

## INTERNATIONAL DISTRIBUTION

Thoroughly understand the importance of distribution in international trade and how basic distribution structures meet international and national needs.

Thoroughly understand the use of the word 'logistics' when applied to commercial distribution and understand the role of logistics in the provision of distribution services.

Be aware of the evolution of the global economy in the last quarter of the 20th century arising from unitisation and intermodal transport development.

Thoroughly understand the supply-chain concept and how the different transport modes may be combined.

Understand the importance of modal interfaces and the basic function of ports, airports, inland depots, railheads etc.

Be aware of the basic intermodal systems: road/rail/sea; sea/air; road/air; road/rail.

Understand the importance of inventory control in operating systems.

## PHYSICAL OPERATION

Thoroughly understand the characteristics of the main types of primary vehicles and equipment used: ships, trucks, trains and aircraft.

Understand the main variant types of special equipment and facilities used to enhance through transport including swapbodies, double stacks, trailer types, container types.

Understand the structural needs and layout of modal interfaces and terminals: depots, warehouses and cargo-handling equipment.

## TRADE ROUTES

Thoroughly understand the relative importance of main trade routes including the main container shipping routes, railway routes and land bridges.

Understand the relationship between commodities, value and transit time and transport mode.

Understand the economic, political and environmental factors arising in respect of road/rail/barge competition and the role of shortsea shipping.

Understand the role of airfreight and its advantages and limitations.

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Understand the role of road haulage and the difference between international, domestic trunk and local delivery.

Thoroughly understand the way in which both the transport and logistics of the distribution of many specialist businesses are closely tailored to their needs. Be aware of, and be able to give examples of, the arrangements made in some representative businesses, for example, hanging garments, bonded goods, perishables, cars, directories.

## **THE PRACTITIONERS**

Thoroughly understand the various types of operator involved in multi-modal transportation and the types of service structure they offer, such as liner operators, NVOCs, freight contractors and forwarders, parcel/courier services, railways, international road haulage and airlines.

Be aware of the growing service overlap of, and competition among, the operators.

Understand the advantages and disadvantages of public versus private sector ownership; single company versus networks; joint services versus alliances.

Understand the options of internal service provision or outsourcing, and the advantages and disadvantages.

## **THROUGH TRANSPORT PRICING**

Thoroughly understand the nature of price competition between transport modes, namely sea versus road/rail versus air. Understand price measurements: tonne-kilometre, and cost-transit time benefit.

Understand the relationship between price and demand. Be aware of the importance of revenue and cash flow.

Understand different pricing strategies, contribution or volume (market share) led. Understand the calculation of through transport pricing, the component price/cost components and the concept of price transparency.

Understand how price discrimination is used.

Understand the use of distribution and carrier service contracts.

## **INVENTORY MANAGEMENT**

Thoroughly understand the use of the word 'inventory' in the context of 'the goods' and the importance of inventory management including the need to control inventory costs.

Understand the concepts of just-in-time delivery, and its advantages and disadvantages compared with warehoused stock. Thoroughly understand the role of supply chain management in optimising inventory.

Understand the use of consolidation and distribution centres; central warehousing versus direct retail delivery.

Be aware of typical supply chain and distribution management systems.

Understand how distribution networks are established and used.

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## **SALE CONTRACTS AND DOCUMENTATION**

Understand methods of payment in the sale of goods.

Thoroughly understand the impact of documentary credits and ICC Uniform Customs and Practice on transport documentation.

Understand the different types of contract in the sale of goods including Incoterms.

Thoroughly understand the paramount importance of bills of lading in through transport, their function and their role in international trade.

Understand the effect of bills of lading legislation such as the UK Carriage of Goods by Sea Act 1992 or equivalent national legislation.

Understand the concept of 'clean' and 'dirty' bills of lading.

Understand the use of letters of indemnity, their misuse and the avoidance of fraud.

Thoroughly understand the different types of bills of lading including ocean, through, combined transport and understand the major and usual clauses including Clause Paramount, Himalaya, identity of carrier and protection clauses.

Understand the importance of endorsements on the back of bills of lading.

Thoroughly understand the difference between bills of lading, waybills and consignment notes and the effect of these on the handover of cargo to receivers.

Understand other transport documentation including booking notes, shipping notes, manifests, dangerous cargo declarations.

## **CONVENTIONS RELATING TO MULTI-MODAL TRANSPORT**

Thoroughly understand the practical impact of Hague, Hague-Visby, Hamburg and Rotterdam Rules and the differences between them.

Understand the rules for combined transport including UNCTAD/ICC.

Understand the application of surface transport rules – CMR, CIM, TIR.

Be aware of the Warsaw Convention and Hague Protocol for air transport.

Thoroughly understand the principles of IMO regulations concerning dangerous and polluting cargoes including the class structure.

Understand the application of European Agreement concerning the Carriage of Dangerous Goods by Road (ADR) or similar legislation elsewhere.

Be aware of the conventions covering the movement of dangerous goods by air.

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## **REGULATION**

Thoroughly understand the impact of national and international regulations including licensing, customs, health, veterinary controls and other restrictions on the movement of goods.

Be aware of how these regulations are imposed and enforced in specific jurisdictions and be able to illustrate this by example.

Be aware of the use of port community computer information systems.

Understand the concept of customs unions, free trade areas and the role of the World Trade Organization (WTO). Be aware of some major free trade areas.

Be aware of statutory competition control including Federal Maritime Commission (USA) and the Competition Directorate (EU).

## **SALES AND MARKETING**

Thoroughly understand the difference between marketing and sales and the importance of both in the multi-modal transport field.

Understand the use of market research and how this can be used in applying marketing techniques.

Be aware of different types of sales systems and understand the role of field sales and call centres. Understand how customer service levels can be measured and how this relates to the use of quality assurance.

Understand the role of quality management including quality assurance (ISO 9000). Be aware of the concept of total quality management (TQM) and the use of benchmarking.

Thoroughly understand the importance of the role of e-commerce in multi-modal transport and in meeting customers' perceived needs for supply chain information and transparency.

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