

CILT International Introductory
Certificate in
Logistics and Transport
Syllabus for Accredited
Learning Centres



The Chartered Institute of
Logistics & Transport

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Guidance Notes

Introduction

This document defines the standards of the new CILT International Introductory Certificate in Logistics and Transport.

Structure of the Qualification:

This is a professional qualification requiring 160 guided learning hours. To achieve the CILT International Introductory Certificate in Logistics and Transport, learners must study and pass two mandatory units and two option units. Option units allow learners to specialise in different areas of logistics and transport and choose units that suit themselves and their employer.

A summary of the units is as follows and full details are provided later in this document:

Code	Title	Status
M1-L2	Introduction to Logistics	Mandatory
M2-L2	Introduction to Customer Service and Marketing	Mandatory
O1-L2	Introduction to Freight Transport Services	Option
O2-L2	Introduction to Passenger Transport Services	Option
O3-L2	Introduction to Warehousing and Inventory	Option
O4-L2	Introduction to Purchasing	Option
O5-L2	Introduction to Planning and Operation of Freight Transport	Option
O6-L2	Introduction to Planning and Operating Passenger Transport	Option

Pathways

CILT International Introductory Certificate in Freight Transport

This will be awarded to learners who have completed:

- M1-L2 Introduction to Logistics
- M2-L2 Introduction to Customer Service and Marketing
- O1-L2 Introduction to Freight Transport Services
- O5-L2 Introduction to Planning and Operation of Freight Transport

CILT International Introductory Certificate in Passenger Transport

This will be awarded to learners who have completed:

- M1-L2 Introduction to Logistics
- M2-L2 Introduction to Customer Service and Marketing
- O2-L2 Introduction to Passenger Transport Services

- O6-L2 Introduction to Planning and Operating Passenger Transport

CILT International Introductory Certificate in Supply Chain

This will be awarded to learners who have completed:

- M1-L2 Introduction to Logistics
- M2-L2 Introduction to Customer Service and Marketing
- O3-L2 Introduction to Warehousing and Inventory
- O4-L2 Introduction to Purchasing

CILT International Introductory Certificate in Transport Planning and Operations

This will be awarded to learners who have completed:

- M1-L2 Introduction to Logistics
- M2-L2 Introduction to Customer Service and Marketing
- O5-L2 Introduction to Planning and Operation of Freight Transport
- O6-L2 Introduction to Planning and Operating Passenger Transport

CILT International Introductory Certificate in Logistics and Transport

This will be awarded to learners who do not wish to specialise in any one area and who have completed any other combination of option units than those listed above.

Short Awards

Each unit can be provided as a short course with assessment and CILT certification.

Assessment

All learners must take and pass a written examination in the two mandatory units and two optional units. Each unit will be assessed by means of a 30-question examination paper. The exams will comprise a selection of multiple-choice questions and short answer questions requiring an answer in the form of short sentences or a simple calculation. The examination will be of 1 hour's duration. All examinations are closed book and the pass mark for each examination will be 50%.

All examinations must be completed within 2 years of initial enrolment.

Examination papers are obtained from CILT(UK) and must be booked 6 weeks prior to the examination date. To order an examination paper, please contact ao@ciltuk.org.uk or telephone +44(0)1536 740170.

Examination papers will be emailed from CILT(UK) two days before the examination date. Answer papers will not be emailed until the day following the examination.

Moderation

Centres will be responsible for invigilating and marking examinations. CILT will moderate a proportion of marked scripts. Contact: colm.holmes@cilt.international.org

Costs

Enrolment fees with CILT are £125 per student which includes:

- Course materials
- Assessment fees¹
- Certification fees
- One year access to e-services offered by CILT(UK). This includes:
 - Access to records of 33,000 journals and 12,00 books
 - Full text articles from 4,500 journals
 - 10,000 global economy reports
 - 800 newspapers from 78 countries in 39 languages for last 60 days
 - Webshop with over 800,000 titles

Enrolments on individual units as short awards are not eligible for student membership of CILT or access to e-services.

Enrolment

Students enrol and pay their fees to the CILT Accredited Learning Centre who will enrol them through CILT Ireland. Contact: gerry@cilt.ie

Further Study

Upon completion of this qualification, learners can continue their studies by enrolling on the Level 3 CILT International Certificate in Logistics and Transport.

Further Information

For further information on the qualification please contact CILT Secretary General: colm.holmes@cilt.international.org

¹ One examination per unit (a total of FOUR examinations) is included in the assessment fees. If re-sits are required, they will be charged at £60 per paper.

Standards for the CILT International Introductory Certificate in Logistics and Transport

Mandatory Units

M1-L2 Introduction to Logistics

M2-L2 Introduction to Customer Service and Marketing

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M1-L2

Introduction to Logistics

Unit purpose and aim

This unit is designed to introduce students to the concept of logistics in its widest sense and to some of the general practices that are important in every part of the logistics working environment. The Unit is made up of four elements that contain sufficient knowledge for students starting out on a logistics career, wherever they may be employed within a logistics context. In each of these sections the emphasis is placed on the principles involved. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- M1-1 Understanding Logistics**
- M1-2 People in the Logistics Working Environment**
- M1-3 Sustainability and the Environment**
- M1-4 The Role of Communications Technology in Context**

Element M1-1

Understanding Logistics

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
1.1. Understand the purpose and scope of logistics.	1.1.1. Describe the purpose and scope of logistics.
1.2. Know the features of a supply chain.	1.2.1. Describe the features of a supply chain.
1.3. Know the features of different types of supply chain.	1.3.1. Differentiate the features of a range of supply chains.
1.4. Know what logistics activities are used by organisations.	1.4.1. Describe the types of logistics activities carried out in a range of organisations.
1.5. Understand the contribution of logistics to organisational objectives.	1.5.1. Recognise opportunities for logistics operations to contribute to organisational objectives.
1.6. Identify the logistical decision factors.	1.6.1. Describe the logistical decision factors. 1.6.2. Apply decision factors in a range of logistical situations.
1.7. Understand the principle of the total cost approach.	1.7.1. Describe the principle of the total cost approach. 1.7.2. Explain the purpose of total costing.
1.8. Know the elements of a total cost model.	1.8.1. Demonstrate how a total cost model is built up from separate cost elements. 1.8.2. Perform a simple total cost calculation.
1.9. Understand how trade-offs are used to produce optimal logistics solutions.	1.9.1. Describe the purpose of trade-offs. 1.9.2. Demonstrate the use of trade-offs in a range of logistics situations.

Indicative Content

The nature of logistics and supply chains.	Logistics related activities; different types of supply chains, e.g. Automotive; Chemical and Petroleum; Clothing and Footwear; Construction; Electronics and Electrical; Food and Drink; Furniture and Furnishings; Paper and Printing; Pharmaceutical and Healthcare; Utilities; Third Party Logistics; Schools; Passenger Transport.
The role of logistics.	Organisations as users of logistics and transport.
Organisational and logistics objectives.	How logistics contributes to achieving the organisation's objectives.
Factors in logistics decision making.	Demand; distance; cost; resource availability; regulations; customers' requirements.
The logistics solution.	Trade-off between factors to achieve best result; total cost approach.

Element M1-2

People in the Logistics Working Environment

Learning Outcomes

The learner will:

2.1. Know the operational characteristics of organisations in the public, private and not-for-profit sectors.

2.2. Understand the logistics roles and responsibilities of employees in the public, private and not-for-profit sectors.

2.3. Understand the aims of staff training and staff development.

2.4. Know the areas for which there is a requirement for statutory compliance training.

2.5. Understand the benefits and problems of the training and development of logistics employees.

2.6. Know the purpose of health and safety regulations relating to logistics operations.

2.7. Understand the main health and safety issues in logistics operations.

2.8. Know the legal responsibilities of logistics employers and employees relating to health and safety.

2.9. Understand the difference between 'risk' and 'hazard', for the purposes of risk assessment.

Assessment Outcomes

The learner can:

2.1.1. Describe the operational characteristics of organisations in the public, private and not-for-profit sectors.

2.2.1. Differentiate between the roles and responsibilities of employees in the public, private and not-for-profit sectors.

2.3.1. Distinguish between the purpose of staff training and staff development.

2.4.1. Classify the areas of logistics operations to which statutory compliance training applies.

2.5.1. Give the positive and negative points for the training and development of a range of logistics employees.

2.6.1. Define the aims of health and safety regulations for a range of logistics operations.

2.7.1. Describe the main types of health and safety problems arising from logistics operations.

2.8.1. Describe the main areas of responsibility for logistics employers and employees.

2.8.2. Describe the health and safety training requirements for a range of logistics employees.

2.3.1. Define 'risk' and 'hazard' in the context of risk assessment.

Learning Outcomes

The learner will:

2.10. Know the process used for a health and safety risk assessment.

Assessment Outcomes

The learner can:

2.10.1. Perform a simple risk assessment appropriate to an area of a logistics operation.

Indicative Content

The working environment.

Different types of organisations: private sector (large and small); public sector; not-for-profit; relevant features and specific issues.

Logistics roles and responsibilities.

Types of jobs and their key functions.

Training and development.

Definitions; statutory and optional training; Continuing Professional Development (CPD); careers and progression.

Health and safety.

Implications for organisations and individuals; ethical behaviour; individual responsibilities; training requirements; regulations affecting logistics operations

Risk assessment

The nature of risk; the nature of hazards; the need for vigilance; risk assessment process; the need for action.

Element M1-3

Sustainability and the Environment

Learning Outcomes

The learner will:

- 3.1. Know the main requirements for a sustainable environment.
- 3.2. Understand the importance of sustainable logistics operations.
- 3.3. Understand the features of sustainable logistics practices.
- 3.4. Know the main environmental and global challenges.
- 3.5. Understand the main areas in which change to sustainable practices is needed.
- 3.6. Understand how good practice in the workplace can be developed into long-term initiatives.

Assessment Outcomes

The learner can:

- 3.1.1 Define the features of a sustainable environment.
- 3.2.1. Describe the reasons for developing sustainable logistics operations.
- 3.2.2. Describe the problems arising from environmentally unacceptable practices.
- 3.3.1. Describe the positive and negative points of sustainable good practice in logistics operations.
- 3.4.1. Use a range of examples to illustrate environmentally unacceptable impacts of logistics in each of the following areas: industrial; commercial; social and economic.
- 3.5.1. Estimate the areas of key importance for change towards sustainable practice.
- 3.6.1. Assess the opportunities for using good practice to make long-term improvements in sustainability.

Indicative Content

Sustainability.	Definition. The need to ensure sustainability.
Environmentally acceptable ways of working.	Sustainable practices, good and best practice, problems if industry fails to respond.
Current considerations and challenges.	An assessment of a sample of current world issues, related to the environment and the need for change.
Good practice.	Actions able to be taken at work in order to support and protect the environment, e.g. an overview of ISO 14000.

Element M1-4

The Role of Communications Technology in Context

Learning Outcomes

The learner will:

- 4.1. Know the respective characteristics of data, information and knowledge.
- 4.2. Know the main elements used in Information Communications Technology (ICT).
- 4.3. Understand the reasons for using operating systems.
- 4.4. Know the features of standard ICT applications used in logistics operations.
- 4.5. Know how ICT can be used in a logistics operation.
- 4.6. Know the main e-Business applications.
- 4.7. Know the main legal responsibilities of organisations for data protection.
- 4.8. Understand the problems of ensuring data security.
- 4.9. Know the health and safety requirements relating to users of ICT.

Assessment Outcomes

The learner can:

- 4.1.1 Differentiate between data, information and knowledge.
- 4.1.2 Define the features of an information system.
- 4.2.1. Describe the ICT elements of: hardware; software and systems.
- 4.3.1. Describe the purpose and value of using Microsoft Windows and other operating systems.
- 4.4.1. Classify the features of a range of standard ICT applications: Microsoft Office; EPOS; RFID and Paragon.
- 4.5.1. Perform a range of simple operations appropriate to a logistics context, using ICT applications from one of the following: Microsoft Office; EPOS; RFID or Paragon.
- 4.6.1. Describe the features of a range of e-Business applications: Internet; Intranet; Extranet; B2B; B2C.
- 4.7.1. Describe the main provisions of the Data Protection Act, relating to organisations' responsibilities.
- 4.8.1. Classify the main data security risks.
- 4.8.2. Describe a suitable process for managing data security.
- 4.9.1. Describe the scope and main provisions of the Display Screen Regulations.
- 4.9.2. Describe the process of a health and safety risk assessment for ICT users.

Indicative Content

Difference between data and information.	Nature of data – facts and figures used for decision making; the nature of information – and knowledge.
Elements of ICT.	Hardware; software and systems.
Operating systems.	Windows and other operating systems.
Common applications.	Applications including MS Office and those that relate to logistics (EPOS, RFID and Paragon).
E-business.	Definition; scope; application; Internet; extranets; intranets; B2B and B2C.
Data security.	Hacking; viruses and data back-up.
Data confidentiality.	Data Protection Act.
Display Screen Regulations.	Scope and risk assessment.

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M2-L2

Introduction to Customer Services and Marketing

Unit purpose and aim

This Unit is designed to introduce students to customer service and the principles of marketing. The Unit is made up of four elements that contain sufficient knowledge to give students an overall view of the important roles played by these elements in the context of logistics and transport. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- M2-1** **Introduction to Customer Service**
- M2-2** **Communications and Customer Service**
- M2-3** **Understanding the Market**
- M2-4** **Principles of Marketing**

Element M2-1

Introduction to Customer Service

Learning Outcomes

The learner will:

- 1.1. Understand the characteristics of different types of customers and their requirements.
- 1.2. Know the features of different types of demand.
- 1.3. Understand the different expectations of customers and their stakeholders.
- 1.4. Understand the relationship between organisations and their stakeholders.
- 1.5. Understand the need for organisations to build and maintain relationships with customers.
- 1.6. Understand the need for responsible trading practices.
- 1.7. Know the elements to be included in a typical service level agreement.

Assessment Outcomes

The learner can:

- 1.1.2. Classify customers into external, internal, business to business, and the general public.
- 1.1.3. Describe the requirements of customers in these classifications.
- 1.2.1. Define different types of demand: primary; secondary; derived; dependent and independent.
- 1.3.1. Differentiate between the expectations of customers and their stakeholders.
- 1.4.2. Use a range of examples to illustrate relationships between organisations and stakeholders.
- 1.5.2. Describe the reasons why organisations build and maintain relationships with customers.
- 1.6.3. Describe organisations' responsibilities to: customers; suppliers; employees; the local community and the environment.
- 1.7.3. Select appropriate elements to be included in a service level agreement for a typical transaction.

Indicative Content

Defining the customer.	External; internal; business to business; general public.
Nature of demand.	Supply and demand variations; primary and secondary (derived) demand; dependant and independent demand.
Organisational relationships.	Expectations of customers and stakeholders, and the importance of building and maintaining customer relationships.
Responsibility.	Service level agreements; role in operations; ethics and environmental considerations.

Element M2-2

Communications and Customer Service

Learning Outcomes

The learner will:

- 2.1. Understand the need to give effective customer service.
- 2.2. Know the components of an effective customer service process.
- 2.3. Understand how organisational structures influence individual roles and responsibilities for customer service.
- 2.4. Understand the importance of effective internal and external communications.
- 2.5. Know the advantages and disadvantages of different methods of internal and external communications.
- 2.6. Understand the importance of improving customer service.

Assessment Outcomes

The learner can:

- 2.1.1. Describe the reasons for giving effective customer service.
- 2.2.1. Describe the role of the following in providing effective customer service: information provision; staff attitudes; response to unplanned incidents; service recovery; complaints handling and feedback processes.
- 2.3.1. Classify the main types of organisational structures and their reporting lines.
- 2.3.2. Assess the impact of different structures on individuals' roles and responsibilities for customer service.
- 2.4.1. Assess the impacts of good and poor internal and external communications.
- 2.4.2. Describe the role of internal and external communications in organisations in managing: customer service policy; media relations; staff communications; publicity and advertising; branding and image.
- 2.4.3. Illustrate the use of appropriate and inappropriate language in internal and external communications.
- 2.5.1. Compare the positive and negative points of different methods of internal and external communications.
- 2.6.1. Assess the role of improved customer service in bringing about: better customer retention; better value for money and excellent performance.

Indicative Content

Customer Service.	Information provision; staff attitude; response to unplanned incidents; service recovery; handling of complaints; customer feedback processes.
Role of the individual.	Company structures and responsibilities; reporting lines; individual actions and the effect on customer service.
Communication.	Internal and external methods; customer service policy; media relations; staff communications; publicity and advertising; appropriate language; branding and image.
Improving customer service.	Customer retention and value to the organisation; exceeding expectations and problem solving.

Element M2-3

Understanding the Market

Learning Outcomes

The learner will:

- 3.1. Know how the market boundaries are defined.
- 3.2. Understand the process of market segmentation.
- 3.3. Understand the responses to change in service from different customer groups.
- 3.4. Know the main categories of information for assessing customer service expectations.

Assessment Outcomes

The learner can:

- 3.1.1. Define the concept of market boundaries.
- 3.1.2. Describe the features of market boundaries: size; modal or intermodal; geographic issues and demography.
- 3.2.1. Describe a range of segmental characteristics: time; cost; distance; quality; common interest; retail; B2B; home shopping; special demand and legal requirements.
- 3.3.1. Assess the potential sensitivity of different customer groups to service changes.
- 3.3.2. Estimate the business, cultural and diversity impacts of service changes for different customer groups.
- 3.4.1. Classify information by: service access; on/off-board services; price; frequency; speed; stopping patterns; vehicle quality; location; product availability and removal of trade barriers.

Indicative Content

Market boundaries.	Size of market; modal or inter modal; geographic considerations and demographic characteristics.
Segments.	Demand by time; cost; distance; quality; common interest; retail; business to business; home shopping; special demands or legislative considerations.
Customer response.	Sensitivity of different groups to change, effect on business, cultural and diversity issues.
Solutions.	Realistic application of information; service access; on/off-board services; price; frequency; speed; stopping patterns; vehicle quality; location; product availability and removal of barriers to trade.

Element M2-4

Principles of Marketing

Learning Outcomes

The learner will:

- 4.1. Understand the purpose of marketing activities.
- 4.2. Know how target markets are defined.
- 4.3. Know the basic activities required to address the expectations of target markets.
- 4.4. Know the types of data used in marketing.
- 4.5. Know how marketing data is researched.
- 4.6. Understand the main external influences on markets.
- 4.7. Know how to produce a simple marketing plan.
- 4.8. Know how to use the 'SWOT' analysis.

Assessment Outcomes

The learner can:

- 4.1.1. Describe the purpose of marketing activities.
- 4.2.1. Define passenger, goods and logistics markets.
- 4.2.2. Define a range of segments within passenger, goods and logistics markets.
- 4.3.1. Describe activities used to address the expectations of target markets: using market intelligence, decision making processes, sales and promotion activities.
- 4.4.1. Use a range of examples to classify data as: primary; secondary; local; national; regional; organisational and official.
- 4.4.2. Describe the positive and negative points of different types of data.
- 4.5.1. Describe the main sources and methods of research used in marketing.
- 4.6.1. Assess the impact of a range of external influences: within modes; between modes; customer perceptions; environmental factors and legal constraints.
- 4.7.1. Describe the components (4Ps) of a simple marketing plan: product, price, promotion and place.
- 4.7.2. Estimate the resource requirements for each of the 4Ps.
- 4.8.1. Apply the 'SWOT' analysis to a marketing situation.

Indicative Content

Purpose.	Define the passenger, goods or logistics market; define segments within the market, the use of market intelligence, decision making processes, sales and promotion.
Information.	Primary and secondary data. (Official statistics, national and local, company data, annual and financial reports.) Methods of research. Advantages and disadvantages of different types.
External influences.	Completion; same mode and other mode; customer perceptions; environmental and legislative.
Simple marketing plan.	4Ps – Product, Price, Promotion, Place. SWOT analysis, resource requirements at each stage.

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Standards for the CILT International Introductory Certificate in Logistics and Transport

Option Units

O1-L2	Introduction to Freight Transport Services
O2-L2	Introduction to Passenger Transport Services
O3-L2	Introduction to Warehousing and Inventory
O4-L2	Introduction to Procurement
O5-L2	Introduction to Planning and Operation of Freight Transport
O6-L2	Introduction to Planning and Operating of Passenger Transport

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01-L2

Introduction to Freight Transport Services

Unit purpose and aim

This Unit is designed to introduce students to freight transport services. The Unit is made up of five sections that contain sufficient knowledge to give students an overall view of this essential role. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- 01-1 Transport and Freight Movements**
- 01-2 Freight Transport Characteristics**
- 01-3 The Organisational Structure of the Freight Transport Industry**
- 01-4 Freight Transport Costs and Charges**

Element 01-1

Transport and Freight Movements

Learning Outcomes

The learner will:

1.1. Appreciate the role of freight transport in society.

1.2. Understand the supply and demand features relating to freight transport.

1.3. Identify the principle control and monitoring mechanisms operating within the freight transport industry.

1.4. Describe how planning enables effective movements of freight transport.

1.5. Understand some of the key considerations when moving freight internationally.

Assessment Outcomes

The learner can:

1.1.1. Distinguish correctly between 'Transport' and 'Movement'.

1.1.2. Appreciate how transport acts as a driver of social and economic development including: trade, economic expansion, sources of goods, processing and consumption.

1.2.1. Describe the supply and demand characteristics of freight transport: primary and secondary demand; derived demand; volumes; flows; modal selection and trade-offs.

1.3.1. Outline the main regulatory and monitoring mechanisms in the freight transport industry: international controls, national controls and local controls.

1.3.2. Explain the need for flexibility.

1.4.1. Describe the tools and techniques related to planning movements and transport: resource availability; suitability; facilities; variables; international factors; security; costs and IT applications.

1.5.1. Identify some of the principle issues that may arise when moving goods internationally and how they may be resolved: documentation; cultures; language; communication; currency; insurance; security and compatibility.

Indicative Content

Principles of freight movements.	Purpose of freight movement, centralised control, regulation flexibility and utilisation of capacity.
Types of movements.	Regular, non-regular and demand driven.
The role of freight transport in society.	Requirement to move goods to trade, between points of source, manufacture and consumption and key to prosperous communities.
Components of the freight transport system.	The route, hubs and warehousing, control and communications, and vehicles and staff.
Market segments.	Raw materials, finished goods and parcels.
Types of freight.	Bulk; Gases; Powders and Liquids; Livestock; Temperature-controlled; Perishable; Dangerous; High Value; Abnormal and multi-drop.
Reasons for movement.	Source of materials, labour market and destination market.

Element 01-2

Freight Transport Characteristics

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
2.1. Describe the characteristics of the different modes of transport.	2.1.1. Explain the characteristics of the major modes of transport: road, rail, air, sea and waterway. 2.1.2. Identify principle minor modes and their applications.
2.2. Identify the principle components of freight transport systems.	2.2.1. Compare the characteristics of freight transport systems: routes; hubs; interchanges; warehousing; storage; distribution; control; communications; vehicles/craft and staff.
2.3. Explain the different market segments, different service levels and the role of load unitisation.	2.3.1. Outline different freight transport market segments: raw materials, goods-in progress and finished goods. 2.3.2. Describe different service level provision and operations: third party provision; returns and repatriation; containers; demountables and unitisation.
2.4. Identify the different types of freight and their main characteristics.	2.4.1. Describe the main types of freight being moved and the related requirements: containers; bulk; gases; powders and liquids; livestock; temperature-controlled; perishable; dangerous; parcels; high value and abnormal size.
2.5. Explain what resources are required to support freight transport and the need for resource optimisation.	2.5.1. Explain the levels and types of support resources used in the freight transport industry: land; labour; skills; capital; infrastructure; storage and processing; services; docking and handling of loads. 2.5.2. Consider the need for the optimum use of all required resources.

Indicative Content

Supply and demand characteristics.	Constraints on supply; primary, secondary and demand (derived demand) volumes; flow; what influences the choice of mode – time/cost/availability trade-offs.
Modes of freight transport.	Road, rail, sea & waterway, air and pipeline.
Collection and distribution centres.	Definition, role and function, size and influence of location.
Facilities and resources of collection and distribution centres.	Infrastructure and storage services, docking, handling of loads and facilities.

Element 01-3

The Organisational Structure of the Freight Transport Industry

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
3.1. Know the basic organisational structures within the freight transport industry for different modes.	3.1.1. Describe the basic management and operational structures of the different modes of transport: road, rail, sea/waterway and air. 3.1.2. Outline the functions of service ancillaries: shipping and other agents, freight forwarders and groupage providers.
3.2. Describe the organisation and role of logistics and distribution providers and how supply chains are structured and function.	3.2.1. Outline forms of logistics operation and function and the role of freight transport in supply chains: logistics operation, 3PL, 4PL, supply chain management and supply chain activity.
3.3. Describe the basic structure of the freight transport industry at international, national/regional and local levels.	3.3.1. Assess the different geographic structures of the freight transport industry at different levels: international, national/regional and local.
3.4. Compare the structural characteristics of user organisations in different modes and different operations.	3.4.1. Describe the different characteristics of different freight transport user organisations in the different modes: global; national; PLCs; SMEs; micro business and the public sector.
3.5. Define the resources required by user organisations in different modes.	3.5.1. Consider the different resources and services required by modern user organisations using freight transport services: service level issues and high street servicing.

Indicative Content

Basic structure of the freight industry for different modes.	Road, rail, sea & waterway, air and pipeline.
Geographically-based structures for the freight transport industry.	International, national, regional and local.
Sizes and types of organisations.	Global, national, PLCs, small/medium enterprises and micro business.
Resources required for different modes.	Land, labour and capital.

Element 01-4

Freight Transport Costs and Charges

Learning Outcomes

The learner will:

4.1. Know the types of costs incurred in freight transport services.

4.2. Understand the link between cost, pricing and profit and the purpose/role of profit in freight transport operations.

4.3. Calculate a charge-out rate using cost data and a required profit level to customers.

4.4. Describe the principles of discounting.

Assessment Outcomes

The learner can:

4.1.1. Understand the purpose of cost in freight transport operations.

4.1.2. Classify types of costs such as fixed, variable, direct and indirect/overhead.

4.1.3. Appreciate additional journey costs that may be incurred.

4.2.1. Explain the relationships between: cost, pricing and profit.

4.2.2. Stakeholders, customers, shareholders and partners.

4.2.3. Re-investment and exchange rate issues.

4.3.1. Calculate a charge-out rate to include a specified profit level, using given cost data: per tonne, per mile and per pallet.

4.4.1. Recognise the opportunities to reduce costs: large consignments; off-peak traffic; economies of scale; overhead sharing; back-loading; contracts and partner organisations.

Indicative Content

Terminology and types of costs.	Terminology: cost centre and cost unit. Types of costs: fixed, variable, direct, indirect and overhead. Importance of including all costs of operation (e.g. third party, tolls, etc.).
Profit consideration.	Types of stakeholder: customers, shareholders, partners and re-investment in business.
Charges/tariffs/rates.	Per load, per tonne, per mile and per pallet.
Volume discounts.	Recognition of opportunities for cost savings over large volume, economies of scale and overhead sharing.
Differential pricing.	How reduced rates can be used to fill space on vehicles (e.g. 'back-loading').

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O2-L2

Introduction to Passenger Transport Services

Unit purpose and aim

This Unit is designed to introduce students to passenger transport services. The Unit is made up of five elements that contain sufficient knowledge to give students an overall view of this essential role. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- O2-1** **Transport and Passenger Movements**
- O2-2** **Passenger Transport Characteristics**
- O2-3** **Structures and Organisations in the Passenger Transport Industry**
- O2-4** **Passenger Transport Costs**

Element 02-1

Transport and Passenger Movements

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
1.1. Know the principles of passenger movement.	1.1.1. Distinguish correctly between 'Transport' and 'Movement'.
1.2. Understand how the principles apply to different types of service.	Apply the principles of movement to: scheduled, non-scheduled and demand-responsive services.
1.3. Understand the role of passenger transport in society.	Describe the role of transport in society, including movement for: employment, education, leisure and social reasons.
1.4. Know the components of a passenger transport system.	1.4.1. Explain the functions of: The way; interchanges and terminals; control and communications systems; ticketing; information; vehicles and staff.
1.5. Know the different passenger market segments.	1.5.1. Classify a range of passenger travel market segments: business, education, leisure, personal and group.
1.6. Understand the characteristics of the different types of passenger transport.	1.6.1. Describe the characteristics and related transport needs of a range of passenger types: individual, group, special needs, time dependence and price sensitive.
1.7. Know the causes for the demand for international passenger movement.	1.7.1. Assess the factors that cause demand for international passenger movements: globalisation, international business and leisure.

Indicative Content

Principles of passenger movements.	Route and time constrained – controlled by the operator. Flexible or contracted – influenced and specified by the passenger.
Types of movements.	Scheduled, non-scheduled and demand responsive.
The role of passenger transport in society.	Requirement of people to move about for employment, education, leisure and social reasons.
Components of passenger transport systems.	The way; interchanges; control and communications; ticketing and information; and vehicles and staff.
Market segments.	Business, education, leisure, personal and group.
Passenger characteristics.	Individual; group; those with particular needs (e.g. physical impairment); time dependent and price sensitive.

Element 02-2

Passenger Transport Characteristics

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
2.1. Understand the supply and demand of passenger transport.	2.1.1. Describe the factors which constrain the supply of passenger transport. 2.1.2. Differentiate between: primary transport demand and secondary (derived) transport demand.
2.2. Understand the characteristics of different modes of passenger transport.	2.2.1. Compare the characteristics of different modes: road, rail, sea/waterway and air.
2.3. Know the role and functions of terminals and interchanges.	2.3.1. Define the purpose and role of terminals and interchanges. 2.3.2. Describe the spatial and land locations of terminals and interchanges. 2.3.3. Compare the activities carried out at terminals and interchanges.
2.4. Know the facilities and resources used at terminals and interchanges.	2.4.1. Describe the facilities and resources used at terminals and interchanges.
2.5. Understand passenger transport operations and facilities in other countries.	2.5.1. Explain the importance of: communication and information, language needs and cultural differences.
2.6. Understand the options for passenger movements involving more than one transport mode.	2.6.1. Assess the options for combining modes of transport in passenger journeys.

Indicative Content

Supply and demand characteristics.	Constraints on supply, primary and secondary demand (derived demand), volumes, tidal flows and what influences the choice of mode – time/cost/availability trade-off.
Modes of passenger transport.	Road, rail, sea & waterway and air.
Terminals and interchanges.	Definition, role and functions, size and influences of location.
The facilities and resources of terminals and interchanges.	Infrastructure and support services, facilities for modes, facilities for passengers and safety and security.

Element O2-3

Structures and Organisations in the Passenger Transport Industry

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
3.1. Know the basic structure for the passenger industry.	3.1.1. Describe the basic industry structure: internationally, nationally, regionally and locally.
3.2. Know the characteristics of organisations in different modes and operations.	3.2.1. Compare the characteristics of different types of organisations: global; national; PLCs; SMEs; micro-businesses and not-for-profit (local authority, social enterprises and community-based).
3.3. Know the reasons for monitoring and controlling international passenger movements.	3.3.1. Describe the purpose of monitoring and controlling international passenger movements.
3.4. Understand the requirements for monitoring and controlling international passenger transport.	3.4.1. Describe the border controls for: checking and controlling documentation; assessing and collecting Customs duties; controlling emigration and immigration and minimising terrorist and security threats.
3.5. Know the assets required by passenger transport organisations.	3.5.1. Assess the requirements for: land, labour and capital.

Indicative Content

Basic structure of the passenger industry for different modes.	Road, rail, sea & waterway and air.
Geographically-based structures for the passenger industry.	International, national, regional and local.
Sizes and types of organisations.	Global; national; PLCs; small/medium enterprises; not-for-profit organisations (social enterprises, local authority and community-based) and micro-business.
Resources required for different modes.	Land, labour and capital.

Element O2-4

Passenger Transport Costs

Learning Outcomes

The learner will:

4.1. Know the types of costs incurred in passenger transport services.

4.2. Understand the purpose of profit for passenger transport operations.

4.3. Know the different methods of calculating charges to customers.

Assessment Outcomes

The learner can:

4.1.1. Understand the purpose of cost in passenger transport operations.

4.1.2. Classify types of costs such as: fixed, variable, direct and indirect/overhead.

4.2.1. Explain the relationships between: cost, pricing and profit.

4.2.2. Distinguish the interests of 'for profit' and 'not-for-profit' organisations.

4.3.1. Differentiate between charges: per passenger, per vehicle and per mile/kilometre.

4.3.2. Calculate a charge-out rate to include a specified profit level, using given cost data.

Indicative Content

Terminology and types of costs.	Terminology: cost centre and cost unit. Types of costs: fixed; variable; direct; indirect and overhead. Importance of including all costs of operation.
Profit consideration.	Types of Stakeholder: customers, shareholders, partners and re-investment in business. Sustaining not-for-profit operations.
Charges/fares.	Per vehicle, per passenger and per mile.
Differential pricing.	Recognition of opportunities once full costs have been met.

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O3-L2

Introduction to Warehousing and Inventory

Unit purpose and aim

This Unit is designed to introduce students to the concept of Warehousing & Storage. The Unit is made up of five elements that contain sufficient knowledge to give students an overall view of the important role played by Warehousing and Inventory in the context of logistics management. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- O3-1 **Inventory**
- O3-2 **The Warehouse**
- O3-3 **Warehouse Principles**
- O3-4 **Storage and Materials Handling**
- O3-5 **Warehouse Processes**

Element 03-1

Inventory

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
1.1. Know the purpose and characteristics of inventory.	1.1.1. Define 'inventory'. 1.1.2. Describe the characteristics of inventory.
1.2. Know the elements of an inventory process.	1.2.1. Describe an inventory process.
1.3. Know the costs associated with inventory.	1.3.1. Describe the costs of inventory.
1.4. Know the purpose and methods of stock identification.	1.4.1. Describe the purpose of stock identification. 1.4.2. Compare methods of stock identification.
1.5. Know the main categories of stock.	1.5.1. Classify stock as: raw materials; parts made; parts supplied; work in progress; fast-moving; cycle; safety; seasonal; promotional; valuable; perishable and dead.
1.6. Understand the role and functions of stock control.	1.6.1. Define stock control. 1.6.2. Differentiate stock control by value and by level.
1.7. Know the factors which determine stockholding.	1.7.1. Compare the use of stockholding determinants.
1.8. Understand the purpose and functions of reverse logistics.	1.8.1. Define 'reverse logistics'. 1.8.2. Use a range of examples to illustrate the functions of reverse logistics.
1.9. Understand the role and function of inventory measurement.	1.9.1. Describe the role and function of inventory measurement. 1.9.2. Compare a range of inventory performance indicators. 1.9.3. Perform a service level calculation using a performance indicator.
1.10. Understand methods used to assess and satisfy demand and service levels.	1.10.1. Compare methods of assessing demand and service levels.

Indicative Content

Inventory.	What is inventory? definition, process, purpose of inventory and costs.
Categories of stock.	Raw materials; parts made and supplied; work in progress; fast moving goods; cycle stock; safety stock; seasonal; promotional; valuable; perishable and dead.
Function of stock control.	Levels vs. values and stockholding drivers.
Reverse logistics.	Definition, purpose and drivers.
Performance indicators.	Purpose, service levels and calculation.
Demand satisfaction.	Purpose and calculation.

Element 03-2

The Warehouse

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
2.1. Understand the role and function of warehouses in the supply chain.	2.1.1. Define a warehouse. 2.1.2. Describe the purpose of warehouses. 2.1.3. Assess the need for warehousing.
2.2. Know the factors which determine warehouse location, type, size and number.	2.2.1. Describe the factors which determine the location, type, size and number of warehouses used in supply chains.
2.3. Understand the impact of e-business on warehouse operations.	2.3.1. Use a range of examples to illustrate how e-business has affected warehouse operations.
2.4. Know the main cost areas for warehouse operations.	2.4.1. Classify the main costs of operating a warehouse: infrastructure, staff, equipment and stock.
2.5. Understand the process of managing security risks in warehouses.	2.5.1. Define the main areas of security risks in a warehouse. 2.5.2. Describe the purpose and process of risk assessment in a warehouse context.
2.6. Understand the health and safety issues in warehouses.	2.6.1. Describe the health and safety issues in warehouses relating to: manual handling; hazardous goods; personal protective clothing/equipment; waste disposal and environmental management.
2.7. Know the main health and safety and environmental responsibilities applying to warehouse operation.	2.7.1. Describe the key areas of health and safety regulations covering warehouse operations. 2.7.2. Use a range of examples to illustrate a safe method of disposing of hazardous waste.

Indicative Content

The nature and purpose of warehouses.	Definition, development and reasons for having a warehouse. Types of warehouse locations.
Warehouse issues.	Number, size and implications of e-business.
Warehouse costs.	Infrastructure, staff, equipment and stock.
Security.	Need for risk analysis.
Health, safety and the environment.	Laws and regulations covering the warehouse; manual handling; hazardous goods; protective equipment and waste/ environmental management.

Element 03-3

Warehouse Principles

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
3.1. Understand the need to use warehouse space effectively.	3.1.1. Define the 'cube'. 3.1.2. Describe the requirement to maximise use of warehouse volume. 3.1.3. Using an example, calculate the free space in a warehouse as a proportion of total size.
3.2. Know the features of the main flow patterns used in warehouses.	3.2.1. Describe 'through' flow and 'U' flow.
3.3. Understand the requirement to segregate stock according to its characteristics.	3.3.1. Describe the reasons for segregating stock according to characteristics: contamination, damage, safety, theft and loss. 3.3.2. Compare methods of segregating stock.
3.4. Understand the concept and application of unitisation.	3.4.1. Define the principle of unitisation. 3.4.2. Describe the advantages of unitisation. 3.4.3. Use a range of examples to apply unitisation principles to different types of stock.
3.5. Know the purpose and processes of stock rotation.	3.5.1. Define stock rotation. 3.5.2. Describe purpose of stock rotation. 3.5.3. Compare the process of stock rotation by first in/first out (FIFO) and last in/first out (LIFO).
3.6. Know the purpose, role and function of packaging.	3.6.1. Describe the purpose, role and function of packaging. 3.6.2. Use a range of examples to illustrate the correct packaging of different types of goods.
3.7. Know the main legal requirements relating to packaging.	3.7.1. Describe the main legal requirements relating to packaging. 3.7.2. Describe the reasons for recycling packaging materials.

Indicative Content

Location.	Location factors.
Using the cube.	Definition.
Flow.	Movement paths, through flow and 'U' flow.
Stock separation.	Valuable; hazardous; hygiene; damage; outside storage; heavy and awkward.
Unitisation.	Definition, examples, and advantages.
Stock rotation.	Definition and purpose, process, FIFO and LIFO.
Packaging.	Definition and purpose, law and recycling.

Element O3-4

Storage and Materials Handling

Learning Outcomes

The learner will:

4.1. Know the types of storage equipment used in warehouses.

4.2. Understand the requirement for flexibility in warehouse equipment.

4.3. Know the purpose and features of location numbering systems used in warehouses.

4.4. Know the main alternatives for storage strategies.

4.5. Know the role and functions of mechanical handling equipment (MHE).

4.6. Understand the criteria for selecting MHE.

4.7. Know the maintenance issues relating to MHE.

4.8. Understand how ICT is used with MHE.

Assessment Outcomes

The learner can:

4.1.1. Describe the types and features of storage equipment used in warehouses.

4.1.2. Use information provided by the Storage Equipment Manufacturers' Association (SEMA).

4.2.1. Assess the requirement for flexibility in warehouse equipment.

4.2.2. Describe how aisle width affects the use of racking.

4.3.1. Describe the purpose of location numbering.

4.3.2. Describe the format of a location numbering system.

4.3.3. Use of an example to illustrate the use of location numbering.

4.4.1. Give the positive and negative points for alternative storage strategies: popularity zoning, fixed zoning and random location.

4.5.1. Define the purpose, role and functions of MHE.

4.5.2. Classify the types of MHE used in warehouses.

4.5.3. Describe the advantages of using MHE.

4.6.1. Describe the criteria for selecting MHE.

4.7.1. Describe the maintenance issues relating to MHE.

4.8.1. Illustrate the use of ICT with MHE.

Learning Outcomes

The learner will:

4.9. Understand the reasons for using automated systems in warehouses.

4.10. Know how Radio Data Transfer (RDT) barcodes and Radio Frequency Identification (RFID) systems are used in warehouses.

Assessment Outcomes

The learner can:

4.9.1. Define automated systems in a warehouse context.

4.9.2. Describe the reasons for using automated warehouse systems.

4.9.3. Use a range of examples to illustrate the use of automated systems in a warehouse context.

4.10.1. Define: 'RDT', 'barcodes' and 'RFID'.

4.10.2. Use a range of examples to illustrate the use of RDT, barcodes and RFID in warehouses.

Indicative Content

Storage Equipment.

Types, characteristics, SEMA, aisle width and the need for flexibility.

Location Numbering System.

Purpose and format.

Storage strategies.

Popularity zoning and fixed/random locations.

Mechanical Handling Equipment (MHE).

Definition and purpose, types, selection factors, maintenance checks and ICT linkage.

Automatic systems.

Definition, applications, RDT, barcodes and RFID.

Element 03-5

Warehouse Processes

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
5.1. Know the process of receiving goods into a warehouse.	5.1.1. Describe the process of receiving goods into a warehouse.
5.2. Know how to place stock into the correct locations.	5.2.1. Use a range of examples to illustrate the placing of stock into correct locations.
5.3. Know the process of picking goods for customer orders.	5.3.1. Describe the process of picking goods for customer orders.
5.4. Know how to prepare goods for delivery to customers.	5.4.1. Describe how different types of goods should be packaged for safe transport and storage.
5.5. Know the process of dispatching goods to customers.	5.5.1. Describe the requirements for dispatching goods to customers.
5.6. Understand the purpose and role of 'housekeeping' in warehouses.	5.6.1. Define the purpose of 'housekeeping' in a warehouse context. 5.6.2. Use a range of examples to illustrate the role of housekeeping.
5.7. Know the requirements of a stocktaking process.	5.7.1. Describe how the stocktaking process should be performed.
5.8. Understand the use of ICT in warehouses.	5.8.1. Define a Warehouse Management System. 5.8.2. Classify different types of Warehouse Management Systems. 5.8.3. Compare the features of different types of Warehouse Management Systems. 5.8.4. Assess the costs and benefits of implementing a Warehouse Management System.

Indicative Content

Warehouse functions.

Receipts; put away; packaging; storage; picking; dispatch; housekeeping and stocktaking.

Computerised systems.

Warehouse management systems and costs/benefits.

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O4-L2

Introduction to Purchasing

Unit purpose and aim

This Unit is designed to introduce students to the concept of Procurement. The Unit is made up of five sections that contain sufficient knowledge to give students an overall view of the important role played by Procurement in the context of logistics management. In each of these sections the emphasis is placed on the principles and techniques involved. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- O4-1 **The Scope of Purchasing**
- O4-2 **Sourcing and Contract Law**
- O4-3 **Purchasing**
- O4-4 **Progress Monitoring and Control**
- O4-4 **Global Sourcing**

Element O4-1

The Scope of Purchasing

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
1.1. Understand the features of the procurement and purchasing functions.	1.1.1. Define the procurement function. 1.1.2. Describe the role and functions of a purchasing system.
1.2. Know the stages of the purchasing process.	1.2.1. Describe the stages of the purchasing process. 1.2.2. Describe the order processing cycle. 1.2.3. Define 'lead-time'.
1.3. Understand the requirements for effective internal relationships.	1.3.1. Describe the cross-functional activities of the purchasing function. 1.3.2. Assess the requirements for maintaining communications with other functions.
1.4. Understand the requirements for effective external relationships.	1.4.1. Describe the implications of the balance of power between buyer and supplier. 1.4.2. Compare different types of relationships between buyer and supplier: adversarial/arm's-length, co-operative and partnership.
1.5. Know the features of the lifecycle/total acquisition cost model.	1.5.1. Define the life-cycle/total acquisition cost. 1.5.2. Use a range of examples to illustrate typical areas of cost at different stages of an item's life-cycle.

Indicative Content

Definition of procurement.	CILT definition, CIPS definition and dictionary.
Process of procurement.	Strategic activities and administrative process.
External relationships.	Balance of power, arm's length relationship, co-operative relationship and partnerships.
Internal relationships.	Interfaces with other departments.
Procurement planning and strategy.	Lifecycle costing. Factors contributing to the total acquisition cost.
Globalisation and sustainability.	Definition and implications.

Element O4-2

Sourcing and Contract Law

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
2.1. Know the main types of information on market trends and conditions.	2.1.1. Define 'supply markets' 2.1.2. Describe types of supply markets: imperfect competition, monopoly, oligopoly and cartels. 2.1.3. Using a range of examples of items, compare supply market trends and conditions: locally, nationally, internationally and globally.
2.2. Know how to analyse supply market information.	2.2.1. Classify information on supply markets by using: PEST and SWOT models.
2.3. Know the advantages and disadvantages of alternative sourcing strategies.	2.3.1. Describe the positive and negative points of: in-house supply/external sourcing, single sourcing, multiple sourcing and supply agreements.
2.4. Know the legislation which applies to supply contracts.	2.4.1. Describe the main provisions of: The Sales of Goods Act and The Supply of Goods and Services Act.
2.5. Know the legal principles relating to supply contracts.	2.5.1. Define a 'contract'. 2.5.2. Describe the legal principles applying to supply contracts. 2.5.3. Describe standard contract terms. 2.5.4. Describe legal issues specific to e-commerce contracts.

Indicative Content

Supply market analysis.	Definition; sources of information; local, national, international market issues and competition.
Supplier appraisal.	Definition; timing; types of appraisal; process and benefits.
Sourcing strategies.	Make or buy, single sourcing, multiple sourcing and supply agreements.
Contract law.	Legal principles, capacity, intention to enter a legal relationship and agreement.

Element O4-3

Purchasing

Learning Outcomes

The learner will:

- 3.1. Know the process for producing a purchasing plan.
- 3.2. Understand the role and function of a specification.
- 3.3. Understand the requirements for supplier appraisal.
- 3.4. Understand the process of supplier appraisal.
- 3.5. Know the procedure for competitive tendering.

Assessment Outcomes

The learner can:

- 3.1.1. Describe the purchasing cycle.
- 3.1.2. Describe the process of producing a purchasing plan.
- 3.2.1. Define 'specification'.
- 3.2.2. Compare the use of different types of specifications: detailed, functional, performance and brand/trade name.
- 3.2.3. Describe specification by: chemical analysis, sample and drawing.
- 3.3.1. Describe the information required for appraising suppliers.
- 3.3.2. Assess the benefits of using a checklist for supplier appraisal.
- 3.4.1. Apply appraisal criteria to a supplier selection process.
- 3.5.1. Describe the procedure for organising a competitive tender.
- 3.5.2. Describe the procedure for evaluating bids in a competitive tender.

Indicative Content

Purchasing planning.	Definition, process and systems.
Specifications.	Definition and purpose; detailed specification; functional specification; performance specification; brand or trade name; chemical analysis; samples and drawings.
Supplier selection.	Process and selection criteria.
Setting up contractual arrangements.	Different types of arrangements, bidding, competitive tendering, negotiation and standard terms.
Placing the contract.	Implications for e-business.

Element O4-4

Progress Monitoring and Control

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
4.1. Know the administrative process for the main elements of the purchasing process.	4.1.1. Describe the administrative documents and processes for: confirming requirements, obtaining quotations, processing orders, expediting orders, receiving and inspecting and processing payment.
4.2. Understand the purpose of monitoring suppliers' performance.	4.2.1. Use a range of examples to illustrate the need for monitoring suppliers' performance.
4.3. Understand the process of vendor rating.	4.3.1. Describe the role and function of a vendor rating system.
4.4. Know the information needed for effective vendor rating.	4.4.1. Describe the information needed for effective vendor rating.
4.5. Understand the reasons for supplier development.	4.5.1. Assess the need for supplier development processes.
4.6. Know the features of a supplier development process.	4.6.1. Describe the features of a supplier development process.
4.7. Understand the importance of effective communications with suppliers.	4.7.1. Use a range of examples to illustrate the role of communications in relationships with suppliers.
4.8. Know the processes for making payment to suppliers.	4.8.1. Describe the processes for making payment to suppliers. 4.8.2. Describe the reasons for retention of payment.

Indicative Content

Expediting.	Definition and process, selection of orders and level of required action.
Receipt and inspection of goods procurements.	Process for rejected deliveries and responsibilities.
Supplier rating.	Definition; scope; process; delivery; quality; sampling and price.
Supplier development importance.	Definition and purpose, process of information and communication.
Payment.	Finance responsibilities and retentions.

Element 04-5

Global Sourcing

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
5.1. Know the role and function of the WTO, GATT and GATT rules applying to global sourcing.	5.1.1. Describe the role and function of the WTO and GATT. 5.1.2. Define the GATT rules applying to global sourcing.
5.2. Know the role and functions of Customs unions and free trade areas.	5.2.1. Describe the role and functions of Customs unions and free trade areas. 5.2.2. Compare the impact of regulations in Customs unions and free trade areas on sourcing costs.
5.3. Know the role and functions of INCOTERMS.	5.3.1. Describe the role and functions of INCOTERMS.
5.4. Understand the use of INCOTERMS in international transactions.	5.4.1. Apply INCOTERMS to a range of international transaction examples.
5.5. Know the documentation required for an international transaction.	5.5.1. Describe the requirements for the transport, import and export documentation: carnets; TREMcards; CMR consignment note; CIM note; bill of exchange; documentary letter of credit and bill of lading.
5.6. Understand the role and functions of forwarding agents.	5.6.1. Describe the role and functions of forwarding agents.

Indicative Content

World Trade Organisation.	Definition of GATT and GATT rules.
Customs unions and free trade areas.	Definition and examples.
Intercoms.	Definition and examples.
Overseas documentation.	Carnets; TREM card; CMR note; CIM note; bills of exchange; documentary letter of credit and bills of lading.
Forwarding agents.	Definition and services.

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O5-L2

Introduction to Planning and Operation of Freight Transport

Unit purpose and aim

This unit is designed to introduce students to the systems and mechanisms used in planning, organising and operating freight transport in local, regional, national and international operations. The unit is made up of five sections that contain sufficient information to give students an overall view of the important roles played by these aspects in the context of logistics. In each of these sections the emphasis is placed on the principles and techniques involved. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- O5-1 Planning Freight Transport**
- O5-2 Route Planning and Scheduling Freight Transport Services**
- O5-3 Collection, Storage and Distribution Centres**
- O5-4 Mechanisms for Controlling Operations**
- O5-4 Regulation and Enforcement of Freight Transport**

Element 05-1

Planning of Freight Transport

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
1.1. Understand why the demand for freight transport occurs.	1.1.1. Describe the nature of the demand for freight transport.
1.2. Understand types and sources of demand for freight transport.	1.2.1. Describe the main types and sources of demand for freight transport: moving raw materials to production facilities and moving finished products to customers.
1.3. Know the main service solution for meeting demand.	1.3.1. Describe the use of different service solutions: Road: containers, curtain-sided, van, tipper, tanker, bulk, livestock and refrigerated. Rail: containers, tankers and bulk. Air: containers and pallets. Water-based: containers, tankers and bulk. 1.3.2. Describe the loading/unloading requirements for different freight vehicles and equipment.
1.4. Know the information requirements for identifying solutions.	1.4.1. Describe the information requirements for: adapting an existing service, planning a new service, costing the solution, implementing a new service, and routing and scheduling to new or adapted service.
1.5. Understand how opportunities and threats generate service changes.	1.5.1. Compare the roles of opportunities and threats in generating service changes: <u>Opportunities</u> : new origins and destinations, market segmentation and distribution network. <u>Threats</u> : competition, materials shortage, changes in employment patterns and changes in markets.

Indicative Content

Sources of demand for freight transport.	Source of raw materials or products, manufacturing or production facilities. Market for products and goods.
Types of service solution.	Road: container, curtain-sided, van, flatbed, tipper, tanker, bulk, livestock and refrigerated Rail: container, tanker and bulk Air: container and pallet Water-based: container, tanker and bulk Loading/unloading requirements.
Opportunities and threats.	Opportunities: new origins and destinations, market segmentation and distribution network. Threats: competition, materials shortage, changes in employment patterns and changes in markets.
Solution identification.	Use of available data, planning and costing of service, introduction of new services/demand or adaptation of existing provision. Role of routing & scheduling.

Element 05-2

Route Planning and Scheduling Freight Transport Services

Learning Outcomes

The learner will:

2.1. Know the characteristics of regular and occasional services.

2.2. Understand the requirements of regular and occasional services.

2.3. Know the distribution routes and requirements for different types of loads.

2.4. Know the main constraints on route planning.

2.5. Know the mechanisms for maximising resource utilisation.

2.6. Know the main IT systems for load consolidation and route planning.

2.7. Know the features of consignment tracking systems for customers' use.

Assessment Outcomes

The learner can:

2.1.1. Differentiate between regular and occasional services.

Regular:	Occasional:
- Scheduled	- Bespoke
- Predictable	- Customer-led
- Time sensitive	- Ad-hoc arrangement

2.2.1. Compare the requirements of regular and occasional services.

2.3.1. Describe distribution routes and requirements for different types of loads: networks, linear routes and hub and spoke systems.

2.4.1. Classify constraints on route planning by: geographical, highway restrictions (e.g. bridges), distance, drivers' hours regulations, time factors and JIT systems.

2.5.1. Describe mechanisms for: organising routes into networks, planning vehicles, planning staff duties and managing peaks in demand.

2.6.1. Compare the features of IT systems for load consolidation and route planning: AutoRoute and Paragon.

2.7.1. Describe the features of consignment tracking systems.

2.7.2. Assess the benefits to customers of using consignment tracking systems.

Indicative Content

Difference between regular and non-regular services.	Regular – runs to a schedule, predictable and time-sensitive Non-regular – customer driven, not time reliant and ad-hoc arrangements.
Describe the routes used for different types of loads.	Networks, linear routes, hub and spoke systems.
Describe the restraints on route planning.	Geographical, highway restrictions (bridges etc.), distance, drivers' hours regulations, time-sensitive and Just in Time systems.
Maximising the utilisation of resources.	Organisation of routes into network, planning of vehicles and staff and peak demand.
Investigate some of the IT systems used in bringing together and planning loads.	AutoRoute, Paragon.

Element 05-3

Collection, Storage and Distribution Centres

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
3.1. Know the role and function of collection, distribution and storage centres.	3.1.1. Describe the role and functions of collection, distribution and storage centres.
3.2. Understand the requirement for collection, distribution and storage centres in a logistics network.	3.2.1. Assess the requirement for collection, distribution and storage centres in a logistics network.
3.3. Know the features of a collection, distribution and storage centre.	3.3.1. Describe the features of a collection, distribution and storage centre. 3.3.2. Describe the facilities required at a collection, distribution and storage centre: Storage space; loading/unloading space; vehicle parking space; materials handling equipment; space and maintenance; staff facilities; office space and systems; packaging materials and storage space; palletising equipment; load consolidation space; safety and security.
3.4. Know the types of freight likely to require collection, distribution and storage facilities.	3.4.1. Classify the main types of freight using a collection, distribution and storage centre: parcels, food, Internet sales and retail supermarkets.
3.5. Know the main IT systems used in collection, distribution and storage operations.	3.5.1. Use a range of examples to illustrate IT systems used for collection, distribution and storage operations.

Indicative Content

What a collection, storage and distribution centre does.	Provides the hub of a collection service, storage and sorting facilities and onward distribution of freight.
The characteristics and facilities of a collection, storage and distribution centre.	Segregated areas for collection, sporting activities and storage where required, with racking. Picking and packing operations and docking facilities for vehicles.
Types of services using a collection, storage and distribution centre.	Parcels, food, Internet sales and supermarkets.
IT systems within, and the facilities required by, a collection, storage and distribution centre.	

Element O5-4

Mechanisms for Controlling Operations

Learning Outcomes

The learner will:

- 4.1. Know the administrative systems and documents used to record details of freight movements.
- 4.2. Know the systems used to track and manage vehicle journeys.
- 4.3. Understand the reasons for using vehicle tracking systems.
- 4.4. Know the documents used to record freight transactions.
- 4.5. Understand the reasons for measuring and recording freight transport operations.
- 4.6. Know the main IT systems used to record freight transport operations.

Assessment Outcomes

The learner can:

- 4.1.1. Describe the systems used to record details of freight movements: loading sheets, waybills and on-board units.
- 4.2.1. Describe the systems used to track vehicle journeys: AVL systems, delivery confirmation, driver communications and breakdown response.
- 4.3.1. Describe the reasons for using vehicle tracking systems: cost control, budgeting, sales recording and delivery confirmation.
- 4.4.1. Define the functions of the: advice note, packing note, delivery note and invoice.
- 4.5.1. Assess the benefits of controlling a range of operational costs: wages, fuel, pence per mile/km and price per tonne.
- 4.6.1. Compare the positive and negative points of IT systems used to record freight transport operations: AutoRoute, Paragon.

Indicative Content

Describe the systems used to record the details of journeys.

Loading sheets, waybills and on board units.

Identify different systems used to track vehicles and the benefits.

AVL systems, proof of delivery and ensuring drivers are doing as they are scheduled.

Describe the reasons for recording transactions.

Budgeting, recording sales, costs, proof of delivery and delivery notes.

Reasons for measuring and recoding the operation.

You can control what you can measure; cost; fuel; wage costs; pence per mile and price per tonne.

Identify IT systems used in recording transactions.

Element 05-5

Regulation and Enforcement of Freight Transport

Learning Outcomes

The learner will:

5.1. Know the reasons for regulating transport.

5.2. Know the methods used to regulate transport.

5.3. Know the organisations which regulate transport in the UK.

5.4. Know the organisations which enforce regulations, locally, nationally and internationally.

Assessment Outcomes

The learner can:

5.1.1. Describe the reasons for regulating transport:

Importance of transport to national economy

Managing the capacity of the transport infrastructure

Maintaining safety and security

Controlling the environmental impacts of transport.

5.2.1. Compare the features of quality regulation and quantity regulation.

5.2.2. Assess the implications of quantity regulation and quality regulation for: operators, vehicles/carrying units and transport staff.

5.3.1. Describe the regulatory role and functions of:

The Department for Transport

The Civil Aviation Authority

The Office of Rail Regulation

The Maritime and Coastguard Agency.

5.4.1. Describe the enforcement role and functions of:

The Traffic Commissioners

The Vehicle and Operator Standards Agency

The Driving Standards Agency

The police

The Health and Safety Executive

The HM Railway Inspectorate

The International Civil Aviation Organisation

The International Air Transport Association.

Indicative Content

Reasons for regulation.	Importance: capacity of infrastructure, safety, security and the environment.
Methods for regulation of transport.	Methods: quality regulation and quantity regulation. Elements: operator, carrying unit and staff. Enforcement by appointed bodies.
Regulatory bodies.	National: Department for Transport, Civil Aviation Authority and Office of Rail Regulation.
Enforcement bodies.	Traffic Commissioner; Vehicle & Operator Services Agency; Driving Standards Agency; police forces, Health and Safety Executive and HM Railway Inspectorate (HMRI).

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O6-L2

Introduction to Planning and Operating Passenger Transport

Unit purpose and aim

This unit is designed to introduce students to the systems and mechanisms used in planning, organising and operating passenger transport in local, regional, national and international operations. The unit is made up of five sections that contain sufficient information to give students an overall view of the important roles played by these aspects in the context of logistics. In each of these sections the emphasis is placed on the principles and techniques involved. The programme aims to equip students with a solid foundation of knowledge on which they can build with experience.

Elements

- O6-1 Planning Passenger Transport**
- O6-2 Route Planning and Scheduling Passenger Transport Services**
- O6-3 Passenger Transport Interchanges and Terminals**
- O6-4 Mechanisms for Controlling Operations**
- O6-5 Regulation and Enforcement of Passenger Transport**

Element O6-1

Planning Passenger Transport

Learning Outcomes

The learner will:

- 1.1. Understand how the demand for passenger transport arises.
- 1.2. Understand the main types and sources of demand for passenger transport.
- 1.3. Know the main service solutions for meeting demand.
- 1.4. Know the information requirements for identifying solutions.
- 1.5. Understand how opportunities and threats generate service changes.

Assessment Outcomes

The learner can:

- 1.1.1. Describe the nature of the demand for passenger transport.
- 1.2.1. Describe the main types and sources of demand for passenger transport: daily and seasonal peaks; tidal flows; a range of origins and destinations; variable demand and market segments.
- 1.2.2. Describe methods of using passenger transport to restrain demand.
- 1.3.1. Describe the use of different service solutions.
Road: high-frequency; limited stop; direct; connecting; inter-urban; hail and ride; demand-responsive; group hire and private hire.
Rail: intercity, local, urban and charter.
Air: scheduled domestic/international and charter.
- 1.4.1. Describe the information requirements for: adapting an existing service, planning a new service, costing the solution and implementing a new service.
- 1.5.1. Compare the roles of opportunities and threats in generating service changes:
Opportunities:
New origins and destinations
Market segmentation
Network provision
Threats:
Competition
Population dispersal
Changes in employment patterns

Indicative Content

Source of demand.	Daily/seasonal peaks; tidal flows; range of origins and destinations; market segments and how demand can vary.
Types of service solution.	Road: high frequency; limited stop; direct; connecting; inter-urban; hail and ride; demand responsive, group and private hire. Rail: intercity, local/urban and charter. Air: scheduled (domestic and international) and charter.
Opportunities and threats.	Opportunities: new origins and destinations, market segmentation and network provision. Threats: competition, population dispersal and changes in employment patterns.
Solution identification.	Use of available data, planning and costing of service, introduction of new services or adaptation of existing provision.

Element O6-2

Route Planning and Scheduling Passenger Transport Services

Learning Outcomes

The learner will:

2.1. Know the characteristics of scheduled and non-scheduled services.

2.2. Understand the requirements of regular and occasional services.

2.3. Know the distribution routes and requirements for different types of loads.

2.4. Know the main constraints on route planning.

2.5. Know the mechanisms for maximising resource utilisation.

2.6. Know the main IT systems for load consolidation. Route planning.

2.7. Know the features of passenger transport information systems.

Assessment Outcomes

The learner can:

2.1.1. Differentiate between scheduled and non-scheduled services.

Scheduled:	Non-scheduled
- Timetabled	- Bespoke
- Advertised	- Customer-led
- Predictable	- Not time-reliant
- Time sensitive	
- 'Turn up and go'	

2.2.1. Compare the requirements of scheduled and non-scheduled services.

2.3.1. Describe distribution routes and requirements for different services. Networks, linear routes and hub and spoke systems.

2.4.1. Classify constraints on route planning: geographical, national borders, distance, drivers' hours regs & low demand.

2.5.1. Describe mechanisms for: organising routes into networks, planning vehicles, planning staff duties and managing peaks in demand.

2.6.1. Compare the features of IT systems for passenger consolidation and route planning: AutoRoute, distinctive systems (coach bookings), Trapeze (ad-hoc loading and scheduling) and Q data (vehicle and crew scheduling).

2.7.1. Describe the features of passenger transport information systems: Acis (real-time information), Traveline, Internet-based information and booking & journey planner.

2.7.2. Assess the benefits to passengers of using transport information systems.

Indicative Content

Difference between scheduled and non-scheduled services.	Scheduled – runs to a timetable, advertised to the public, turn up and go, predictable, and time sensitive Non-scheduled – bespoke service, not time reliant and customer led.
Describe the routes.	Networks, linear routes and hub and spoke systems.
Describe the restraints on route planning.	Geographical, borders, distance, regulations and low demand.
Maximising the utilisation of resources.	Organisation of routes into network, planning of vehicles and staff and peak demand.
Passenger transport information systems.	Real-time passenger information systems (Acis), Traveline, Internet systems for rail and air including booking systems and journey planner.
Investigate some of the IT systems used in bringing and planning loads of passengers and goods.	AutoRoute, distinctive systems (for coach bookings), Trapeze (ad-hoc loading and scheduling) and Q data (vehicle and crew scheduling).

Element O6-3

Passenger Transport Interchanges and Terminals

Learning Outcomes The learner will:	Assessment Outcomes The learner can:
3.1. Know the difference between the role and functions of an interchange and a terminal.	3.1.1. Differentiate between the role and functions of interchanges and terminals.
3.2. Understand the requirement for interchanges in a transport network.	3.2.1. Assess the requirement for interchanges in a transport network.
3.3. Know the features of interchanges.	3.3.1. Describe the features of interchanges. 3.3.2. Describe the facilities required at interchanges: loading space; stabling; passenger handling facilities; passenger comfort facilities; staff facilities; retail outlets; baggage handling; transfer facilities and safety and security.
3.4. Understand the main factors to be considered when planning interchanges.	3.4.1. Assess the main factors to be considered when planning interchanges: location, modes and capacity.
3.5. Understand the requirements of different multi-modal interchanges.	3.5.1. Classify the types of interchanges used for transferring between two or more transport modes. 3.5.2. Use examples to illustrate different types of modes at interchanges: Rail/Air (Heathrow/Gatwick/Birmingham) Bus/Rail (Euston/King's Cross/ Bradford).

Indicative Content

Difference between a terminal and an interchange.	Definition of terminal (end of the route) and interchange to allow change to another route or modal network.
Need for an interchange.	Gives access to a network of the same mode or another mode. Allows travel over a much wider area or greater distance. Consolidation of loads.
Requirements when planning.	Location key to change networks, different modes and storage capacity (i.e. depot).
Facilities.	Loading space; stabling; passenger handling facilities; passenger comfort facilities; retail; baggage handling and transfer facilities.
Examples of multi-modal interchanges.	Rail/Air – Heathrow, Gatwick, Birmingham. Bus/Rail – Euston, King’s Cross, Bradford.

Element O6-4

Mechanisms for Controlling Operations

Learning Outcomes

The learner will:

- 4.1. Know the administrative systems and documents used to record the details of passenger journeys.
- 4.2. Know the systems used to track and manage vehicle journeys.
- 4.3. Understand the reasons for using vehicle tracking systems.
- 4.4. Know the information available from passenger transactions.
- 4.5. Understand the reasons for measuring and recording passenger transport operations.
- 4.6. Know the main IT systems used to record passenger transport operations.

Assessment Outcomes

The learner can:

- 4.1.1. Describe the systems used to record the details of freight movements: ticket machines, smartcards, turnstiles and on-board units.
- 4.2.1. Describe the systems used to track vehicle journeys: ACIS, Siemens RTP1 systems, driver communications and breakdown response.
- 4.3.1. Describe the reasons for using vehicle tracking systems: recording ticketing transactions; budgeting; planning to meet demand; delivery confirmation and recording seasonal trends.
- 4.4.1. Classify the information available from ticketing data and receipts.
- 4.5.1. Assess the benefits of controlling a range of operational costs: wages, fuel, pence per mile/km and price per passenger.
- 4.6.1. Compare the positive and negative points of IT systems used to record freight transport operations: Wayfarer, Timtronic, Aimex and Trapeze.

Indicative Content

Describe the systems used to record the details of journeys.	Ticket machine data, on-board units, smartcards and turnstiles.
Identify different systems used to track vehicles, and the benefits.	Acis, Siemens RTPI systems, ensuring drivers are operating as scheduled, response to operations issues and breakdowns.
Describe the reasons for recording transactions.	Budgeting, recording money transactions (bus/coach tickets), planning and meeting demand and record seasonal trends.
Reasons for measuring and recoding the operation.	You can control what you can measure; cost; fuel; wage costs; pence per mile and pence per tonne.
Identify IT systems used in recording transactions.	Wayfarer, Timtronic, Almex and Trapeze.

Element O6-5

Regulation and Enforcement of Passenger Transport

Learning Outcomes

The learner will:

5.1. Know the reasons for regulating transport.

5.2. Know the methods used to regulate transport.

5.3. Know the organisations which regulate transport in the UK.

5.4. Know the organisations which enforce regulations locally, nationally and internationally.

Assessment Outcomes

The learner can:

5.1.1. Describe the reasons for regulating transport:

Importance of transport to the national economy

Managing the capacity of the transport infrastructure

Maintaining safety and security

Controlling the environmental impacts of transport.

5.2.1. Compare the features of quality regulation and quantity regulation.

5.2.2. Assess the implications of quantity regulation and quality regulation for operators, vehicles/carrying units and transport staff.

5.3.1. Describe the regulatory role and functions of:

The Department for Transport

The Civil Aviation Authority

The Office of Rail Regulation

The Maritime and Coastguard Agency.

5.4.1. Describe the enforcement role and functions of:

The Traffic Commissioners

The Vehicle and Operator Standards Agency

The Driving Standards Agency

The police

The Health & Safety Executive

The HM Railway Inspectorate

The International Civil Aviation Organisation

The International Air Transport Association

Indicative Content

Reasons for regulation.	Importance: capacity of infrastructure, safety, security and the environment.
Methods for regulation of transport.	Methods: quality regulation, quantity regulation. Elements: operator, carrying unit and staff. Enforcement by appointed bodies.
Regulatory bodies.	Local: local authorities. National: Department for Transport, Civil Aviation Authority and Rail Regulator.
Enforcement bodies.	Traffic Commissioner, Vehicle Operators Services Agency, Driving Standards Agency, police forces, Health and Safety Executive and Rail Inspectorate.