

Module Description:

Information Technology and its use in organisations and across the supply chain has become a determinant of competitive advantage for many corporations. Increasingly, smaller and medium sized businesses are being integrated into the global business network via technologies such as EDI and E-business.

This module introduces the fundamental principles of information systems, their characteristics, basic configuration considerations, available applications, and the importance of IT in the context of increasingly global competition.

It addresses the applicability of a range of different of point and enterprise solutions in a variety of supply chain settings. It also explores the application of a range of existing and emerging communications technologies such as EDI and web based technologies.

It enables learners to reflect on the evolving role of information and communications technology in the supply chain.

Module Aim:

- This module is designed to enable the learners to understand the main approaches to effective application of IT in Supply Chain Management.

Learning Outcomes:

On successful completion of this module, the learner will be able to:

- Explain the importance of the right choice in IT decision making
- Detail the basic configuration principles and the choices of applications

On successful completion of this module, the learner will be able to:

- Explain the economic implications of IT deployment and of the cost of failure to the supply chain.
- Detail the capabilities of a range of both point and enterprise solutions aimed at improving logistics capability

On successful completion of this module, the learner will be able to:

- Detail the applicability of a range of both and point and enterprise solutions in a variety of supply chain contexts
- Detail the use of technologies such as EDI and E-business and outline the importance of Web-based solutions.

On successful completion of this module, the learner will be able to:

- Build upon the knowledge gained to further enhance IT competences

On successful completion of this module, the learner will be able to:

- Scrutinise and reflect on the role of IT in supply chain management

Learning and Teaching Methods:

Formal lectures are supplemented by structured classroom discussions. In addition, the case studies and application demonstrations constitute over 50% of the module. The former highlights the practical issues associated with the effective application of IT in supply chain management while the latter provides a practical view of the capability of a range of applications.

Module Content:

- Introduction to Information Technology; structuring of the learning process for this module; the role of IT in supply chain management.
- Basic Technologies: this part of the module is an intensive “primer” on IT basics which ensures that all learners are at a common level of understanding.
- Personal computers, corporate intranets, local area networks, wide area networks
- Basic applications, operating systems, business applications, word processors, spreadsheet software, database software, presentation software, internet applications, legacy systems
- Information retrieval, analysis and storage
- IT as an enabling technology in supply chain management; the role of IT in achieving corporate and supply chain objective; main elements of an IT strategy.
- IT applications and demonstrations (where appropriate) in supply chain management
- Point solutions in warehousing and inventory management, purchasing, transport management (e.g. vehicle routing and scheduling) and production planning and control.
- Enterprise solutions (MRP to DRP to ERP) with an emphasis on ERP and linking logistics with other functions such as finance, marketing and human resource management.
- E-commerce and E-business: key issues in using the internet as a marketing and distribution channel; from web-based selling to real E-business.
- Real Life Case Studies: Company representatives from various industries (transport, manufacturing, services) will present IT solutions and case studies
- Trends in IT: world wide web developments, ERP approaches and the virtual organisation, embedded AI, middleware applications

Module Assessment:

Assessment is by post-module assignment which will assess if the learner can explain the importance of the right choice in IT decision making, detail the basic configuration principles and the choices of applications, explain the economic implications of IT deployment and of the cost of failure to the supply chain and detail the capabilities of a range of both point and enterprise solutions aimed at improving supply chain capability.

Further Details:

Duration: 40 hours

Reading List*Essential Reading:*

Information Technology Fundamentals, NITL Module Manual.

Supplemental Reading:

Simchi-Levi, D., Kaminsky, P., and Simchi-Levi, E., Designing and Managing the Supply Chain, McGraw-Hill, 1999..

Personal Computer Fundamentals for Technology Learners: Hardware, Dos, Windows, Marc E. Herniter / Paperback / Published 1997

Collaborative Technologies and Organisational Learning (Series in Information Technology Management), Robert E. Neilson / Paperback / Published 1997

Competing in the Information Age: Strategic Alignment in Practice , Jerry N. Luftman (Editor), Hardcover, 414 pages, (August 1996), Oxford Univ. Press

Relevant up-to-date journal articles from appropriate sources will be included in the module manual and the following journals are regarded as the primary sources of related information:

- Business Process Management Journal
- Journal of IT Cases and Applications
- Knowledge and Process Management
- MIS

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