

B.A (VS) MATERIALS MANAGEMENT

SEMESTER – III

DISCIPLINE SPECIFIC CORE COURSE – 3.1 (DSC-3.1)

Warehouse Management and Inventory Control

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE, REQUISITES OF THE COURSE

| Course title & Code | Credits | Credit distribution of the course | | | Eligibility criteria | Pre requisite of the course (if any) |
|---------------------|---------|--|----------|---------------------|----------------------|--------------------------------------|
| | | Lecture | Tutorial | Practical/ Practice | | |
| | | Warehouse Management and Inventory Control DSC: 3.1 | 4 | 3 | | 1 |

Learning Objectives:

To understand the concepts of warehouse management and inventory control, students will get a basic idea about warehousing and inventory management techniques. It will help them in understanding the need for warehouse management systems and measures of Material handling systems.

Learning Outcomes:

After completion of this course, the learners will be able to:

1. recognize the need for warehousing in today's competitive environment and how supply chain trends are impacting the design and operation of warehouses.
2. identify different types of material handling equipment and their characteristics and use a material handling equipment checklist to select the most suitable equipment for a given warehouse operation.
3. develop strategies for improving receiving and issuing material operations, including the use of barcoding and RFID technologies, the use of automation, and the optimization of picking and replenishment operations.
4. identify the functions of inventory and the different types of inventories, including WIP, finished goods, and MRO.
5. evaluate the applications of barcoding technology in material handling systems, including the benefits of real-time data collection, accuracy, and efficiency.

Unit 1: Introduction to Warehousing**(10 Hours)**

Warehouse: definition, warehouseman, depositor. Warehouse functions, warehouse process, types of warehouses: public and private warehouses, warehousing corporations-central and state warehouses, role of warehousing in an economy, Supply chain trends affecting warehousing, Problems and challenges in warehousing, characteristics of ideal warehouse, warehousing for online businesses. Recent trends in warehousing: Cloud-based operations management, Technology for omnichannel logistics, Simulation to anticipate needs, Logistics decisions based on big data, Robotics and Drones in warehousing.

Unit 2: Warehouse Management Systems**(9 Hours)**

Warehouse management systems, the necessity of WMS, warehouse location, Logics of determining locations and sequences, independent demand systems, uncertainties in material management systems, dependent demand systems, distribution resource planning. The layout of the warehouse, Size and shape of the warehouse, Storage utilization and organization, Types of storage systems, fixed versus random location, Material handling equipment, Material handling equipment checklist, Improving the receiving/issuing material operations, choosing a WMS-the process implementation-cloud computing, Warehouse Layout-Data collection-space calculation-aisle width- finding additional space.

Unit3: Warehouse and Its Operations**(9 Hours)**

The principles and performance measures of material handling systems –Vehicle travel path (time) – Handling time –vehicle utilization –number of loads completed –congestion –Effective performance systems, Importance of Warehouse Information, Decision Making Using Warehouse Information, ICT Applications in a Warehouse, Fundamentals of various types of material handling systems –automated storage and retrieval systems Bar Code Scanners, Wireless LAN, Mobile Computers, Bar coding technology and applications RFID technology. Warehouse automation.

Unit4: Inventory Management in Warehouse**(9 Hours)**

Introduction to inventory management, role in the supply chain, role in competitive strategy: Role of inventory, functions of inventory, types of inventories, WIP inventory, finished goods inventory, MRO (maintenance, repair, and operations) inventories, cost of inventories, need to hold inventory. Warehousing and inventory costs, Customer service in warehousing, locating inventory, organizing inventory, Dispatching inventory, Methods of inventory control: ABC Inventory control, managing inventories by ABC, FSN, EOQ, Batch tracking, multi –echelon inventory systems Managing inventory in multi echelon networks –managing inventory in single echelon networks.

Unit 5: Material Handling and Warehouse Safety**(9 Hours)**

Material Handling and Warehouse Safety: Material handling, Product movement-concept-costs-product load activity, dispatch activity unload, activity-control device-impact of computer technology-automatic identification-issues and trends in product transport, Packaging, Pallet, Stretch wraps, Cartons, Labelling, Health.

Practical Exercises:

The learners are required to:

1. identify the issues affecting warehousing and warehousing facilities by visiting to some warehouse.
2. prepare a report on the inventory management of any given company.
3. suggest the solutions to various uncertainties in material management systems in any warehouse
4. prepare the report on the multi –echelon inventory systems of any company.
5. apply the material handling systems for any company of your choice
6. to prepare report as a warehouse manager for a retail company that sells clothing and accessories online which want to set up a new warehouse facility for the company.

Suggested Readings:

- Arnold, J. R., & Chapman, S. N. (2018). *The Introduction to Materials Management* (7th ed.). Prentice-Hall.
- Blanchard, D. (2018). *Supply Chain Management Best Practices*. Wiley Publishing.
- Coyle, J. J., Jr., Langley, C. J., Novack, R.A., & Gibson, B.J. (2022). *Managing Supply Chains: A Logistics Approach* (9th ed.). McGraw-Hill.
- Chopra, S., & Meindl, P. (2018). *Supply Chain Management: Strategy, Planning, and Operation*. Pearson Education.
- Ten Hompe, M., & Schmidt, T. (2017). *Warehouse Management: Automation and Organisation of Warehouse and Order Picking Systems* [With CDROM]. Springer Verlag.
- Jessop, D. (1999). *Stores and Inventory Management*. Chartered Institute of Purchasing and Supply.
- Jacobs, F. R., & Chase, R. B. (2017). *Operations and Supply Chain Management*. McGraw-Hill Education.
- Mangan, J., Lalwani, C., & Butcher, T. (2016). *Global Logistics and Supply Chain Management*. John Wiley & Sons.
- Mentzer, J. T., Stank, T. P., & Esper, T. L. (2008). *Supply Chain Management: Principles and Practice*. Sage Publications.
- Rushton, A., Croucher, P., & Baker, P. (2020). *The Handbook of Logistics and Distribution Management: Understanding the Supply Chain*. Kogan Page.
- Saxena, J.P. (2018). *Warehouse Management and Inventory Control*. Vikas Publication House Pvt Ltd.
- Tompkins, J.A., & Harmelink, D. (2017). *Basics of Supply Chain Management*. St. Lucie Press.
- Waters, D. (2017). *Supply Chain Management: An Introduction to Logistics*. Palgrave Macmillan.
- Wild, R. (2017). *Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse*. Kogan Page.

Notes:

1. Suggested readings shall be updated and uploaded on the college website from time to time.
2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 3.1 (DSC-3.1)
DSC 3.2: BUSINESS LAWS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE, REQUISITES OF THE COURSE

| Course title & Code | Credits | Credit distribution of the course | | | Eligibility criteria | Prerequisite of the course (if any) |
|-----------------------------------|---------|-----------------------------------|----------|------------------------|----------------------|-------------------------------------|
| | | Lecture | Tutorial | Practical/ Practice | | |
| BUSINESS LAWS DSC: 3.2 | 4 | 3 | 1 | 0 | Pass in Class XII | NIL |

Learning Objectives:

To impart basic knowledge of the important business laws relevant for the inception and conduct of general and business activities with relevant case laws.

Learning outcomes:

After completion of this course, the learners will be able to:

1. apply the basic aspects of contracts vis-à-vis agreements and subsequently enter into valid business propositions.
2. describe various modes of discharge of contract and remedies available in case of breach.
3. compare and contrast between different type of special contracts.
4. examine the rights and obligations under the Sale of Goods Act.
5. explain the procedure related to Issue of digital signature.
6. demonstrate skills to form and manage entrepreneurial ventures as LLP.

Unit 1: The Indian Contract Act, 1872

(9 Hours)

Contract – meaning, characteristics and kinds; Essentials of a valid contract, offer and acceptance, consideration, contractual capacity, free consent, the legality of objects; Void agreements; Quasi-contracts. Modes of discharge of contract

Unit 2: Remedies for Breach and Special Contracts

(9 Hours)

Breach of contract; Remedies for breach of contract, Contracts of Indemnity and Guarantee; Contracts of Bailment and Pledge; Contract of Agency.

Unit 3: The Sale of Goods Act, 1930

(9 Hours)

Contract of sale; Meaning and the difference between a sale and agreement to sell; Conditions and Warranties; Transfer of ownership in goods including sale by non, owners; Performance of the Contract of Sale; Unpaid seller – meaning and rights of an unpaid seller against the goods.

Unit 4: The Information Technology Act 2000**(9 Hours)**

Definitions under the Act. Digital signature. Electronic governance. Attribution, acknowledgement, and dispatch of electronic records. Regulation of certifying authorities. Digital signatures certificates. Duties of subscribers under the Act. Penalties and adjudication. Offences as per the Act.

Unit 5: The Limited Liability Partnership Act, 2008**(9 Hours)**

Salient Features and Nature of LLP; Small LLP; Difference between LLP and Partnership, LLP and Company; LLP Agreement; Incorporation Document; Incorporation by registration; Registered office of LLP and change therein; Change and Rectification of the name of LLP; Partners and Designated Partners: Partners and their Relations; Extent and limitation of liability of LLP and partners; Whistleblowing; Conversion into LLP.

Practical Exercises

After completion of this course, the learners will be able to:

1. identify components of valid contracts present in the rent agreement/ sale deed/appointment letters used or seen in day-to-day life.
2. identify and enumerate types of damages in case of breach of contract under different real, life situations.
3. prepare a list of gratuitous and non, gratuitous bailment contracts entered in daily life.
4. analyse some case studies where 'caveat emptor' is applicable.
5. explore the procedure for issue of digital signature.
6. examine RUN form and FiLLip webform from notification on MCA portal and enlist the mandatory fields for LLP.

Suggested readings

- Bhushan, B., Kapoor, N. D., Abbi, R., & Kapoor, R. (2020). *Elements of Business Laws*. Sultan Chand.
- Dagar, I., & Agnihotri, A. (2020). *Business Laws*. Sage Textbook.
- Jagota, R. (2021). *Business Laws*. MKM Publishers Scholar Tech Press.
- Kuchhal, M. C., & Kuchhal, V. (2023). *Business Laws*. Vikas Publishing House.
- Maheshwari, S. N., & Maheshwari, S. K. (2017). *A Manual of Business Laws*. Himalaya Publishing House Pvt. Ltd.
- Sharma, J. P., & Kanojia, S. (2018). *Business Laws*. Bharat Law House Pvt. Ltd.
- Singh, A. (2008). *The Principles of Mercantile Law*. Eastern Book Company.
- Sulphey, M. M., & Basheer, A. (2014). *Laws for Business* (5th ed.). PHI Learning.
- Tulsian, P. C. (2000). *Business Law*. Tata McGraw Hill.

Notes:

- Suggested readings shall be updated and uploaded on the college website from time to time.
- Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 3.1 (DSC-3.1)**Indian Economic Environment****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE, REQUISITES OF THE COURSE**

| Course title & Code | Credits | Credit distribution of the course | | | Eligibility criteria | Prerequisite of the course (if any) |
|--|---------|-----------------------------------|----------|---------------------|----------------------|-------------------------------------|
| | | Lecture | Tutorial | Practical/ Practice | | |
| | | | | | | |
| Indian Economic Environment DSC – 3.3 | 4 | 3 | 1 | 0 | Pass in Class XII | NIL |

Learning Objectives:

The course aims to familiarise students with the basic framework of Indian economy and the recent developments. It provides understanding about the economic crisis of 1991 and the subsequent reforms that followed. It explains the role of foreign trade, Foreign Direct Investment (FDI) and foreign capital in economic development.

Learning Outcomes:

After completion of the course, learners will be able to:

1. explain the evolution of India's industrial growth experience and describe the relationship between economic growth and development, the idea of sustainability, circular economy and Sustainable Development Goals (SDGs).
2. examine the impact of policy changes in both the agriculture and the industry sector.
3. appraise the economic and social outcomes of policy initiatives in the services sector.
4. critique the role of foreign trade and foreign capital in India's development process.

Unit- 1: Indian Economy: An Overview**(12 Hours)**

A brief introduction to the current structure of the Indian economy: Evolution of Indian economic environment, import substitution to globalisation, the impact of the Covid-19 pandemic on the Indian economy;

Redefining development: changing ideas on growth and development, the idea of human development, the Human Development Index (HDI), the Gender Inequality Index (GII), the Gender Development Index (GDI), understanding the concepts and India's performance on these indicators; the idea of circular economy and Sustainable Development Goals (SDGs) 2030.

Unit 2: Transforming Agriculture - Current Trends and New Areas of Growth (11 Hours)

Role and importance of agriculture: data on poverty, inequality and growth without employment, the high proportion of population engaged in agriculture and the low agricultural productivity- broad trends and the instability in output, concerns of food security and nutritional outcomes, commitments to SDGs.

Issues in agriculture: rural credit and institutional finance, transportation and infrastructure, agricultural marketing, availability of agricultural inputs, technology and water management, soil degradation, rural entrepreneurship, crop insurance, contract farming, etc.

The need for a transformative vision in agriculture: new emerging areas and their impact on ecological management- including sustainable agriculture, alternative farming and organic farming, horticulture and floriculture, multi-layer farming etc.

Unit 3: Industrial Performance - An Appraisal (11 Hours)

Industrial development: post 1991 trends and growth, the new economic policy, public sector reforms and privatisation, the slow growth of the manufacturing sector and the issue of the 'missing middle', the challenges of finance, regulations and labour laws, the role of Micro, Small and Medium Enterprises (MSMEs) and the challenges faced by them.

Unit 4: Foreign Trade, Foreign Capital, Multi-National Corporations (MNCs) and the Services Sector (11 Hours)

Foreign trade and trade policy: post 2000 trends in trade, the concept of global value chains, importance of trading blocks and trade agreements, India's experience, growth and contribution of foreign capital and MNCs.

Growth of the services sector in India: recent trends, growth in the information and communication technology (ICT) & IT enabled services (ITES) sectors, education, health, banking and insurance, etc., impact of digitization and servicification.

Practical Exercises:

The learners are required to:

1. discuss main economic challenges faced in India (Unit1)
2. make a presentation on circular economy and the progress made towards the achievement of the 17 SDGs. (Unit 1)
3. form groups to make case studies on different aspects of India's economic performance (education, migration, employment, industrial production, exports, digital economy, e-commerce, etc.) during Covid-19. (Unit1)
4. make a group presentation on the pros and cons of the recent farm laws. (Unit 2)
5. design a questionnaire about the issues confronting small and medium enterprises for primary data collection from a industry in the vicinity and present analyses in the class. (Unit 3)
6. engage in a group project on different types of services (food delivery provided by restaurant chains/local neighbourhood eateries/home cooked tiffins, streetside fast food, etc. Other service providers such as pest control services, cleaning services, home health aide workers, parlours, gyms, cyber cafes, etc. operating in and around the student's neighbourhood. (Unit 4).

Suggested Readings

- Chand, R. (2022). *Indian agriculture Towards 2030- Need for a transformative Vision* in Chand. R. et al. (Ed.). *Indian Agriculture towards 2030*, India studies in Business and Economics, New Delhi: Springer.
- Dreze, J. & Sen, A. (2013). *India: An uncertain glory – India and its contradictions*, New Jersey: Princeton University Press. Chapter 2.

- Global value Chains (GVCs): India, OECD. <https://www.oecd.org/sti/ind/gvcs%20-%20india.pdf>
- Gulati, A. & Juneja, R., (2022). Transforming Indian Agriculture. Chand, R. Ed. *Indian Agriculture towards 2030*. India studies in Business and Economics, New Delhi: Springer.
- Joshi, V. (2017) *India's long road- the search for prosperity*. Allen Lane: Penguin Random House, Chapter 2.
- Kapila, U. (2022-23), (Ed.) *Indian economy since independence* (33th ed.), New Delhi: Academic foundation.
- Kapila, U. (2022). *Indian Economy: Performance and policies* (22nd ed.). New Delhi: Academic Foundation.
- Lerwen, L. & Ramakrishná, S. (2021). *An introduction to Circular Economy*, Singapore: Springer.
- Puri, V.K., Misra, S.K., & Garg, B. (2022). *Indian Economy* (40th ed.). New Delhi: Himalaya Publishing House.
- Walter, R. (2019). *The Circular Economy: A User's Guide*, New York: Routledge.

Additional Readings:

- Chatterjee, S. & Subramaniam, A. (2020). India's inward Re (turn) Is it warranted? Will it work? *Ashoka Centre for Economic Policy paper no 1*. October. https://ashoka.edu.in/static/doc_uploads/file_1602585593.pdf
- Eichengreen, B. & Gupta, P. (2012) Exports of Services: Indian Experience in Perspective. *National Institute of Public Finance and Policy. Working Papers*, 12/102.
- Marcello, T. & Cristoni, N. (2018). *Strategic Management & the Circular Economy*, New York: Routledge.
- Subramaniam, A. & Felman, J. (2021). India's stalled rise - How the State Has Stifled Growth, *Foreign Affairs*. Watson Institute for International and Public Affairs and Brown University.

Notes:

1. Suggested readings shall be updated and uploaded on the college website from time to time.
2. Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi from time to time.