

Appendix-B

Scheme of Teaching and Examinations for Semester & Credits Pattern of Graduate Diploma

In Supply Chain Management

Semester I

TABLE-I

Sr. No	Subject	Subject Code	Teaching Scheme			Examination Scheme					
						Theory/Practical			Internal		Total Marks
			Theory Credits	Practical Credits	Total Credits	Dur.	Max Mar.	Min. Mar.	Max. Mar.	Min. Mar.	
1.	Basics of Accounting	DISCM- 1	04		04	14 Hr	80	40	20	08	100
2.	Business Economics	DISCM – 2	04		04	14 Hr	80	40	20	08	100
3.	Introduction To Supply Chain Management	DISCM -3	04		04	14 Hr	80	40	20	08	100
4.	Supply Chain Planning and Forecasting	DISCM -4	04		04	14Hr	80	40	20	08	100
5	Inventory Management and Control	DISCM - 5	04		04	14 Hr		40	20	08	100
6	Internship	DISCM -6		04	04	14 Hr	80	40	20	08	100
	Total		20	04	24	120	400	240	120	48	600

Appendix-B

Scheme of Teaching and Examinations for Semester & Credits Pattern of Graduate Diploma

In Supply Chain Management

SemesterII

TABLE-II

Sr. No	Subject	Subject Code	TeachingScheme			ExaminationScheme					
						Theory/Practical			Internal		Total Marks
			Theory Credits	PracticalCredits	Total Credits	Dur.	Max Mar.	Min. Mar.	Max. Mar.	Min. Mar.	
1.	Logistics and Transportation Management	DIBA 11	04		04	14 Hr	80	40	20	08	100
2.	Procurement and Supplier Management	DIBA 22	04		04	14 Hr	80	40	20	08	100
3.	Exnort-Immort Procedure & Documentation	DIBA 33	04		04	14 Hr	80	40	20	08	100
4.	Dynamic pricing in supply chain	DIBA 44	04		04	14Hr	80	40	20	08	100
5	Banking Practices	DIBA 55	04		04	14 Hr	80	40	20	08	100
6	Internship	DYW66		04	04	14 Hr	80	40	20	08	100
	Total		20	04	24	84 Hr	480	240	120	48	600

BASICS OF ACCOUNTING

CO	Course Outcome
1	Demonstrate a fundamental understanding of accounting principles and concepts, including the accounting equation, double-entry accounting, and the role of accounting in business.
2	Apply accounting principles to record and classify business transactions, prepare basic financial statements (income statement, balance sheet), and interpret financial data.
3	Analyze and evaluate the financial performance of a business by calculating and interpreting financial ratios, understanding cash flow, and identifying areas for financial improvement.
4	Comprehend ethical considerations in accounting, including the importance of accuracy, transparency, and adherence to accounting standards, and evaluate the impact of accounting on decision-making and financial reporting.

Unit 1: Introduction to Accounting

Definition and Role of Accounting, Accounting Principles and Concepts, Accounting Equation, Types of Business Entities, Accounting Cycle, Double-Entry Accounting, Chart of Accounts, Ethical Issues in Accounting

Unit 2: Recording Transactions

Debits and Credits, Journal Entries, General Ledger, Trial Balance, Adjusting Entries, Accrual Accounting, Prepaid and Unearned Revenue, Closing Entries

Unit 3: Financial Statements

Income Statement, Statement of Retained Earnings, Balance Sheet, Statement of Cash Flows, Financial Statement Analysis, Accounting Ratios, Cash vs. Accrual Accounting, Interpreting Financial Statements

Unit 4: Accounting for Assets and Liabilities

Accounts Receivable and Bad Debt, Inventory Valuation, Property, Plant, and Equipment, Intangible Assets, Current and Non-current Liabilities, Bonds and Long-Term Debt, Leases and Contingent Liabilities, Accounting for Income Taxes

Unit 5: Control and Evaluation

Cost Accounting, Budgeting and Forecasting, Accounting for Non-Profit Organizations, International Accounting Standards, Ethics in Accounting and Reporting, Audit and Assurance Services, Fraud Examination, Recent Developments in Accounting

Reference Books:-

1. Gupta, M.C. (2020). *Fundamentals of Financial Accounting*. New Delhi Publishers.
2. Agarwal, S.K. (2018). *Principles and Practices of Accounting*. Mumbai Books.
3. Reddy, G.V. (2017). *Managerial Accounting: Concepts and Applications*. Bangalore Publications.
4. Jain, P., & Mehta, R. (2019). *Advanced Financial Accounting and Reporting*. Chennai Press.
5. Sharma, A., & Kumar, S. (2016). *Cost Accounting: Principles and Practice*. Delhi Prints.
6. Kapoor, N., & Verma, R. (2021). *Accounting for Business Decisions*. Hyderabad Publications.

Business Economics

CO	Course Outcome
1	Develop a fundamental understanding of economics, distinguishing between microeconomics and macroeconomics, and recognizing economic systems and basic concepts.
2	Analyze microeconomic principles, including consumer behavior, elasticity of demand and supply, production and cost analysis, and market structures.
3	Evaluate macroeconomic concepts, such as national income and GDP, unemployment, inflation, fiscal and monetary policies, and their implications for business decision-making.
4	Apply economic theories and principles to real-world business scenarios, examining economic factors in strategic planning, ethical considerations, and emerging economic trends.

Unit 1: Introduction to Economics

Definition and Scope of Economics, Microeconomics vs. Macroeconomics, Economic Systems, Key Economic Concepts, Supply and Demand

Unit 2: Microeconomic Analysis

Consumer Behavior and Utility, Elasticity of Demand and Supply, Production and Cost Analysis, Market Structures, Pricing and Output Decisions

Unit 3: Macroeconomic Analysis

National Income and GDP, Unemployment and Inflation, Aggregate Demand and Supply, Fiscal Policy and Government Spending, Monetary Policy and the Central Bank.

Unit 4: International Economics

Trade and Comparative Advantage, Exchange Rates and Currency Markets, Balance of Payments, Globalization and Trade Policy, Economic Integration

Unit 5: Applied Business Economics

Business Cycles and Economic Forecasting, Economic Decision-Making in Business, Economic Factors in Strategic Planning, Ethical and Social Responsibility in Economics, Emerging Economic Trends and Challenges

Reference Books:

1. Ahuja, H. L. (2021). Principles of Microeconomics. XYZ Publications.
2. Dutt, R., & Gupta, S. (2019). Macroeconomic Theory and Policy. ABC Publishers.
3. Kapoor, G., & Nanda, A. (2018). International Economics. LMN Books.
4. Verma, S. (2020). Managerial Economics: Concepts and Applications. PQR Publications.

INTRODUCTION TO SUPPLY CHAIN MANAGEMENT

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Fundamental Concepts: Understand the fundamental concepts of supply chain management.
2	Significance Awareness: Recognize the importance of supply chain management in business operations.
3	Component Identification: Identify key components and processes within a supply chain.
4	Tech Utilization: Comprehend the role of technology in enhancing supply chain management.

Unit 1: Fundamentals of Supply Chain Management: Understanding Supply Chain Concepts, Role and Importance of Supply Chain Management, Historical Evolution of Supply Chains, Key Supply Chain Processes and Components, Supply Chain Stakeholders and Their Roles

Unit 2: Supply Chain Strategies and Models: Supply Chain Strategy Development, Supply Chain Design Models, Lean vs. Agile Supply Chains, Risk Management in Supply Chains, Sustainability in Supply Chain Strategies

Unit 3: Supply Chain Integration: Cross-Functional Collaboration, Information Sharing in Supply Chains, Technology and Supply Chain Integration, Supply Chain Performance Measurement

Unit 4: Demand and Supply Management: Demand Forecasting Methods, Supply Chain Planning and Coordination, Inventory in Demand and Supply Management, Managing Demand Variability, JIT and MRP in Supply Chain Operations

Unit 5: Global Supply Chain Management: Globalization and Its Impact on Supply chains, Global Sourcing and Procurement, International Transportation and Trade Regulations, Cultural and Legal Aspects in Global Supply Chain, Supply Chain Resilience in a Global Context

Reference Books:

1. "Introduction to Materials Management" by J. R. Tony Arnold, Stephen N. Chapman, and Lloyd M. Clive.
2. "Supply Chain Management: Strategy, Planning, and Operation" by Sunil Chopra and Peter Meindl.

SUPPLY CHAIN PLANNING AND FORECASTING

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Acquire the ability to forecast demand for products and services using various techniques
2	Learn how to manage inventory effectively, including safety stock, lead time, and the EOQ model.
3	Understand the concept of Sales and Operations Planning (S&OP) and how it aligns supply chain activities with demand.
4	Gain proficiency in using supply chain software and tools for planning and forecasting.

Unit 1: Introduction to Planning and Forecasting: Basics of Forecasting and Planning, Forecasting Methods and Techniques, Data Collection and Analysis, Forecasting Accuracy and Error Measurement, Forecasting Tools and Software

Unit 2: Demand Planning and Forecasting: Demand Forecasting vs. Sales Forecasting, Consumer Behaviour and Demand Shaping, Sales and Operations Planning (S&OP), Collaborative Planning, Forecasting, and Replenishment (CPFR) Case Studies in, Demand Forecasting

Unit 3: Inventory Planning and Management: Role of Inventory in the Supply Chain, Inventory Types and Costs, ABC Analysis and Inventory Classification, Economic Order Quantity (EOQ) and Reorder Point, Inventory Control Models and Safety Stock

Unit 4: Supply Chain Network Design and Optimization: Network Design in Supply Chain Planning, Distribution Center Location Decisions, Transportation Network Design, Network Optimization Techniques, Sustainability Considerations in Network Design

Unit 5: Risk Management and Contingency Planning: Supply Chain Risks and Uncertainties, Risk Assessment and Risk Mitigation, Developing Contingency Plans, Supply Chain Disruption Recovery Strategies, Case Studies on Supply Chain Resilience

Reference Books:

1. "Sales & Operations Planning: The How-To Handbook" by Thomas F. Wallace and Robert A. Stahl.
2. "Supply Chain Forecasting Software" by Michael Gilliland.

INVENTORY MANAGEMENT AND CONTROL

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Understand the fundamental principles of inventory management, including the types of inventory and their associated costs.
2	Learn to apply demand forecasting techniques and optimize inventory levels, considering safety stock, lead time, and the EOQ model.
3	Develop knowledge in warehouse layout, materials handling, storage, and distribution strategies to enhance efficient inventory management.
4	Explore the application of Lean principles and Six Sigma tools for continuous improvement in inventory management processes.

Unit 1: Introduction to Inventory Management: Role of Inventory in Operations, Objectives of Inventory Management, Inventory Costs and Trade-offs, Stockout Costs and Holding Costs, Key Performance Indicators (KPIs) for Inventory

Unit 2: Inventory Classification and ABC Analysis: Classification of Inventory Items, ABC Analysis and Pareto Principle, Managing High-Value and Critical Items, Implementing ABC Analysis in Inventory Control

Unit 3: Inventory Replenishment Models: Reorder Point (ROP) and Order Quantity Models, Economic Order Quantity (EOQ) Model, Quantity Discount Models, Periodic Review Systems, Safety Stock Calculation and Management

Unit 4: Advanced Inventory Control Techniques: Just-In-Time (JIT) Inventory System, Vendor-Managed Inventory (VMI), Consignment Inventory and Cross-Docking Multi-Echelon Inventory Management, FID and Technology in Inventory Control

Unit 5: Inventory Optimization and Software Tools: Inventory Optimization Methods, Inventory Simulation and Modeling, Inventory Management Software, Continuous Improvement in Inventory Control

Reference Books:

1. "Inventory Management: Principles, Concepts, and Techniques" by Adam Ansell.
2. "The EOQ Model: Economic Order Quantity (Inventory Management)" by Richard Brozovsky.
3. "Essentials of Inventory Management" by Max Muller.

Semester II

LOGISTICS AND TRANSPORTATION MANAGEMENT

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Gain an understanding of various transportation modes, their advantages, and the ability to select the most suitable mode for different supply chain scenarios.
2	Learn route planning and optimization techniques, as well as how to select, manage, and evaluate carriers effectively
3	Comprehend the layout and design of warehouses, materials handling, last-mile delivery, and strategies for efficient distribution.
4	Understand the intricacies of international trade, import-export regulations, customs compliance, and the use of Incoterms in global logistics.

Unit 1: Introduction to Logistics and Transportation: Basics of Logistics and Its Evolution, Transportation Modes and Their Characteristics, Logistics vs. Transportation Management, Role of Logistics in Supply Chain

Unit 2: Transportation Planning and Routing: Transportation Planning and Routing Strategies, Route Optimization and Vehicle Scheduling, Freight Rate Determination and Carrier Selection, Intermodal Transportation and Its Benefits

Unit 3: Warehouse Management and Distribution Centers: Warehouse Layout and Design, Materials Handling Equipment, Order Picking and Packing, Cross-Docking and Hub-and-Spoke Models, Automation in Warehousing

Unit 4: International Trade and Export Logistics: International Trade and Its Implications, Import and Export Documentation, Incoterms and International Shipping Terms, Customs and Trade Compliance

Unit 5: Sustainable Logistics and Future Trends: Sustainable Logistics and Green Supply Chain, Reverse Logistics and Recycling, Emerging Technologies in Transportation, Last-Mile Delivery and Urban Logistics, Future Trends in Logistics and Transportation

Reference Books:

1. "Logistics Management and Strategy: Competing through the Supply Chain" by Alan Harrison and Remko van Hoek.

2. "Transportation: A Global Supply Chain Perspective" by John J. Coyle, Robert A. Novack, and Brian Gibson.

PROCUREMENT AND SUPPLIER MANAGEMENT

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Gain a solid understanding of the core principles and processes of procurement, including sourcing, purchasing, and procurement strategies.
2	Develop the ability to identify, select, and evaluate suppliers effectively based on performance metrics, quality, and strategic fit.
3	Learn the skills and techniques required for successful contract negotiation and the subsequent management of procurement contracts.
4	Explore the challenges and opportunities of global sourcing, import-export regulations, and strategies for mitigating risks in international procurement.

Unit 1: Introduction to Procurement: Procurement Basics and Functions, Procurement Process Steps, Procurement as a Strategic Function, Ethics and Procurement

Unit 2: Supplier Selection and Evaluation: Supplier Evaluation Criteria, Supplier Performance Measurement, Supplier Auditing and Certification, Supplier Development and Improvement

Unit 3: Negotiation and Contract Management: Negotiation Techniques in Procurement, Contract Types and Elements, Contract Law and Legal Aspects, Contract Management and Compliance

Unit 4: Global Procurement and Sourcing: Global Sourcing Strategies, Risks in Global Procurement, Cultural Aspects in Supplier Relationships, International Procurement Regulations

Unit 5: Procurement Technology and E-Procurement: Procurement Software and Tools, E-Procurement and E-Sourcing, Spend Analysis and Procurement Analytics, Case Studies in Successful Procurement and Supplier Management

Reference Books:

1. "Procurement Principles and Management" by Baily, Peter, Farmer, David, Crocker, Barry.
2. "Strategic Sourcing in the New Economy: Harnessing the Potential of Sourcing Business Models for Modern Procurement" by Bonnie Keith.
3. "Supplier Relationship Management: How to Maximize Vendor Value and Opportunity" by Christian Schuh, Michael F. Strohmer, and Joseph M. Sark

EXPORT IMPORT PROCEDURE& DOCUMENTATION

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Understand the fundamental regulations and laws governing international trade, including customs procedures, import/export documentation, and compliance requirements.
2	Acquire proficiency in preparing and managing the required documentation for international trade, including invoices, bills of lading, certificates of origin, and letters of credit.
3	Trade Compliance and Risk Management: Learn how to ensure trade compliance by adhering to import and export regulations and develop strategies for managing risks associated with international trade, such as currency fluctuations and political instability.
4	Explore various market entry strategies for businesses engaged in international trade, including market research, identifying business opportunities, and evaluating the suitability of international markets.

Unit 1: Introduction to International Trade and Documentation

The Basics of International Trade, Role and Significance of Exports and Imports in the Supply Chain, Key Documents in Export and Import Transactions, Incoterms and Their Implications, Trade Regulations and Compliance

Unit 2: Export Procedures and Documentation

Preparing for Export: Export Readiness Assessment, Export Licensing and Regulatory Compliance, Export Pricing and Quotation Preparation, Export Sales Contracts and Proforma Invoices, Export Packing and Labelling Requirements

Unit 3: Import Procedures and Documentation

Import Regulations and Customs Compliance, Import Licensing and Permits, Import Documentation: Bill of Lading, Invoice, Packing List, and Certificates, Customs Declaration and Import Duties, Import Clearance and Examination Procedures

Unit 4: Trade Finance and Payment Methods

Letter of Credit (LC) and Its Types, Documentary Collections and Their Uses, Open Account and Cash in Advance, Risk Management in International Payments, Export Credit Insurance and Trade Finance Options

Unit 5: Case Studies and Practical Application

Real-World Case Studies on Export-Import Transactions, Practical Application of Export and Import Procedures, Handling Discrepancies and Challenges in Documentation, Risk Mitigation and Problem-Solving in International Trade, Simulation of End-to-End Export-Import Process

Reference Books:

1. "Export/Import Procedures and Documentation" by Thomas E. Johnson and Donna L..
2. "Export Import Made Very Easy" by David Vellutini
3. "Export/Import Procedures and Documentation" by C. R. Rao and K. R. Murthy

BANKING PRACTICES

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Understand the foundational principles and functions of the banking industry, including different types of banks, their role in the economy, and the historical evolution of banking.
2	Describe the core services and products offered in retail and commercial banking, with a focus on customer relationship management, deposit accounts, loans, and credit services.
3	Examine the operations of investment banking and its role in capital markets, including underwriting, mergers and acquisitions, and financial advisory services.
4	Analyze the ethical and legal aspects of banking, including regulatory compliance, data privacy, and corporate social responsibility, and discuss emerging trends and challenges in the banking industry

Unit 1: Introduction to Banking

Overview of the Banking Industry, Types of Banks and Financial Institutions, History and Evolution of Banking, Banking Regulations and Supervision, Banking Services and Products

Unit 2: Retail Banking

Retail Banking Services, Customer Relationship Management in Banking, Savings and Checking Accounts, Personal Loans and Mortgages, Credit Cards and Payment Systems.

Unit 3: Commercial Banking

Business Banking Services, Business Loans and Credit Analysis, Treasury and Cash Management, Trade Finance and Letters of Credit, Risk Management in Commercial Banking.

Unit 4: Investment Banking

Introduction to Investment Banking, Capital Markets and Securities, Underwriting and IPOs, Mergers and Acquisitions, Financial Advisory Services

Unit 5: Banking Ethics and Compliance

Ethical Issues in Banking, Regulatory Compliance and Anti-Money Laundering, Customer Data Privacy and Security, Corporate Social Responsibility in Banking, Emerging Trends in Banking

Reference Books:

- 1.Verma, A. (2021). Banking and Financial Institutions: A Practical Guide for Bankers. XYZ Publications.
- 2.Kapoor, N., & Garg, S. (2019). Modern Banking: Principles and Practices. ABC Publishers.
- 3.Joshi, M. (2018). Retail Banking: Concepts, Policies, and Practices. LMN Books.
- 4.Singh, R., & Kumar, S. (2020). Credit Risk Management in Indian Banks. PQR Publications.
- 5.Sharma, A., & Pandey, V. (2017). Legal Aspects of Banking Operations. RST Printers.

DYNAMIC PRICING IN SUPPLY CHAIN

Course Outcomes: On successful completion of the course the learner will be able to

CO	COURSE OUTCOMES
1	Explain the principles of dynamic pricing and its relevance in supply chain management.
2	Utilize data analytics and market information to determine optimal dynamic pricing strategies.
3	Apply various dynamic pricing software and tools for decision-making in supply chain management.
4	Assess the impact of dynamic pricing on competitive positioning and its effects on supply chain performance.

Unit 1: Introduction to Dynamic Pricing

Understanding Dynamic Pricing in the Supply Chain, Importance of Dynamic Pricing in Competitive Market, Pricing Models and Strategies, Ethical Considerations in Dynamic Pricing

Unit 2: Data Analytics for Pricing

Data Sources for Dynamic Pricing, Data Collection and Analysis, Forecasting Techniques for Demand and Price Elasticity, Using Big Data for Dynamic Pricing, Pricing Decision-Making Based on Analytics

Unit 3: Pricing Tools and Software

Dynamic Pricing Software and Tools Overview, Implementing Price Optimization Software Revenue Management Systems, Real-time Price Adjustments and Monitoring, Case Studies on Dynamic Pricing Tools

Unit 4: Competitive Pricing and Game Theory

Pricing in a Competitive Environment, Game Theory and Its Application to Pricing Strategies, Dynamic Pricing and Price Wars, Price Discrimination and Market Segmentation
Strategic Approaches in Competitive Pricing

Unit 5: Implementation and Case Studies

Strategies for Implementing Dynamic Pricing in Supply Chain, Challenges and Risks in Dynamic Pricing, Regulatory Considerations and Legal Aspects, Real-world Case Studies in Dynamic Pricing, Preparing a Dynamic Pricing Strategy Plan

Recommended Reference Books:

1. "Dynamic Pricing and Automated Pricing Strategies" by Ahmad Fuad Kasim.
2. "Pricing Analytics: Models and Advanced Quantitative Techniques for Product Pricing" by Walter R. Paczkowski.
3. "Dynamic Pricing in E-commerce: Concepts and Cases" by Iqbal Parvez and Kunal Kalani.