



## Integral University, Lucknow

Effective from Session: 2023-24							
Course Code	BM 401	Title of the Course	Principles of Management	L	T	P	C
Year	I	Semester	I	3	0	0	3
Pre-Requisite	None	Co-requisite	None				
Course Objectives	This paper provides the basic knowledge of management principles and thought thereby inculcating the qualities required for managing businesses.						

Course Outcomes	
CO1	To explain the meaning and nature of management. Students should also relate the contribution of different significant theories to the field of management
CO2	Students should be able to apply the concept of planning and organizing to real world problems
CO3	They should understand the concepts related to staffing and role of motivation towards employee productivity
CO4	To acquire knowledge about various leadership styles and the role of communication in organizations
CO5	To understand the process of controlling and types of control methods. Also they should know about the ways of effective change in management.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Management Concept	Concept, Nature, Importance and functions of management. Management as a process, Managerial skills, levels of management & roles, Contribution of Taylor, Fayol, Weber & Hawthorne studies, Concept of Social Responsibility & Ethics.	7	1
2	Introduction to Functions of Management	Planning: Nature, Scope, Objectives and Significance of Planning, Types of Planning, Process of Planning, Barriers to Effective Planning, Planning Premises and Forecasting, Key to Planning, Decision Making. Organizing: Concept, Organization Theories, Forms of Organizational Structure, Delegation of Authority, Authority & Responsibility	7	2
3	Staffing & Directing	Staffing: Concept, & importance of staffing, Introduction to HRM and its functions Directing: Concept, Direction and Supervision Motivation: Concept, Motivation and Performance, Theories Of Motivation: Maslow's Need hierarchy, Herzberg's two-factor Theory, McClelland's Theory of Needs, Vroom's Theory of Expectancy, McGregor's Theory X and Theory Y, Adam's Equity Theory, Approaches for Improving Motivation, Quality of Work Life, Morale Building	8	3
4	Leadership & Communication	Leadership: The Core of Leadership: Influence, Functions of Leaders, Leadership Style, Leadership Development. Communication: Communication Process, Importance of Communication, Communication Channels, Barriers to Communication	7	4
5	Controlling & recent trends	Controlling: Concept, Types of Control, The Quality Concept Factors affecting Quality, Developing a Quality Control System, Total Quality Control, . Change and Development: Need for Change, Model for Managing Change New Trends in Organizational Change Management, Management of Virtual organisations	6	5

### References Books:

Koontz & Weirich Essential of Management, TMH, Mar 22, 2012

V S P Rao, V Hari Krishna-Management: Text and Cases, Excel Books Edition, May 11, 2011.

Ricky W. Griffin, Texas A&M University, Cengage Publication, Edition Mar 2013.

Chuck Williams, Butler University, Principle of Management, Cengage Publication, Latest edition Jan 2013

### e-Learning Source:

<https://nptel.ac.in/>

[https://swayam.gov.in/nc\\_details/NPTEL Course A](https://swayam.gov.in/nc_details/NPTEL_Course_A)

Course Articulation Matrix: (Mapping of COs with POs and PSOs)									
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	-	2	-	3	-	-	1	-	2
CO2	-	2	-	2	3	-	-	-	2
CO3	-	-	-	2	-	-	2	2	3
CO4	2	-	2	-	3	-	-	-	3
CO5	2	-	2	-	-	2	2	-	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University, Lucknow

Effective from Session: 2020-2021							
Course Code	BM-402	Title of the Course	Managerial Economics	L	T	P	C
Year	I	Semester	I	3	1	0	4
Pre-Requisite	None	Co-requisite	None				
Objective	The objective of the course is to equip the students from the various economic issues that they are expected to face as managers at the firm level. The course also aims to make the students aware of the working of the markets, the determination of prices and the techniques of decision making that they can adopt to ensure that sound decisions are made						

Course Outcomes	
<b>CO1</b>	To demonstrate the understanding of the concept, nature and scope of managerial economics, apply decision making and analyze and evaluate principle opportunity cost.
<b>CO2</b>	To demonstrate the understanding, analysis and evaluation of theory of demand and consumer behavior.
<b>CO3</b>	To demonstrate the understanding, analysis and evaluation of laws of production and behavior of cost and decision making.
<b>CO4</b>	To demonstrate the understanding, evaluation and analysis of various market structures and design pricing decisions.
<b>CO5</b>	To demonstrate the understanding, evaluation and analysis of national income, inflation and monetary and fiscal policies in real world situations and business cycles in the open economy.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	<b>Introduction</b>	Importance, Nature, Scope and Role of Managerial Economics in Decision Making, Objectives of Business Firms, Profit as Business Objective - Accounting Vs Economic Profit.	8	1
2	<b>Theory of Demand &amp; Supply</b>	Analysis of Individual Demand, Meaning of demand, Consumer demand-cardinal and ordinal utility, Derivation of individual demand curve, Analysis of market demand, Meaning, types and determinants of demand and Demand function, Elasticity of demand-Price, Income, Cross and Advertising elasticity of demand, Concept of Supply & Elasticity of supply.	10	2
3	<b>Theory of Production and Cost</b>	Theory of production, Law of Variable proportions, Cobb-Douglas Production Function, Isoquant and Iso-cost curve analysis, factor productivity & return to scale, Economies of Scale, Cost concepts, Theory of cost- the cost output relationship in short run and long run, Concepts of Break-even analysis, marginal and incremental analysis.	9	3
4	<b>Market Structure &amp; Pricing Theory</b>	Pricing under different demands conditions: Perfect competition, Monopoly, monopolistic and Oligopoly, Kinked demand curve, Cournot's model, Cartels, Price Discriminations.	9	4
5	<b>Macroeconomics Concept</b>	Concept of GDP, National Income Measurement - Net Output Method, Factor Income Method, Expenditure Method, Business Cycles-types and phenomenon, Inflation- Concept and Importance, Monetary approach, Concepts of CPI and WPI.	9	5

### Reference Books:

Dobbs, I. M., Managerial Economics, Oxford: Oxford University Press, 2000

Dwivedi, D.N., Managerial Economics, Vikas Publishing House Pvt. Ltd., 2009

Mansfield, E., Managerial economics - Theory, Application and cases, New York, 1996

Salvatore, D., Managerial Economics in Global Economy, 4<sup>th</sup> ed., Thompson - South- Western, 2001

Smith, A., The Wealth of Nations, Modern Library edition, New York: Random House, 1937

### e-Learning Source:

<https://nptel.ac.in/courses/110105075>

[https://onlinecourses.nptel.ac.in/noc23\\_mg43/preview](https://onlinecourses.nptel.ac.in/noc23_mg43/preview)

Course Articulation Matrix: (Mapping of COs with POs and PSOs)									
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	3	-	2	3	1	3	1	1	-
CO2	2	2	2	1	-	1	1	2	1
CO3	2	-	1	3	-	1	2	-	-
CO4	1	2	1	3	-	2	2	-	1
CO5	1	2	2	1	1	2	2	-	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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**Integral University, Lucknow**

Effective from Session: 2023-24										
Course Code		BM404	Title of the Course		Marketing Management		L	T	P	C
Year		I	Semester		I		3	0	0	3
Pre-Requisite		None	Co-requisite		None					
Course Objectives		The purpose of this course is to develop and understanding of the underlying concepts, strategies and issues involved in the marketing of products and services								
Course Outcomes										
CO1	To familiarize the students with the fundamentals of marketing & to enable them to take better marketing decisions.									
CO2	To discuss and make the students understand the nuances and complexities involved in various product and pricing decisions.									
CO3	To equip the students to take effective segmentation, targeting and positioning decisions for products and services									
CO4	To develop the skills among students to enable them to design the Promotion-Mix strategies & advertising campaigns									
CO5	To make the students aware about the current trends in marketing to enable them to take proactive measures while taking marketing decisions.									
Unit No.	Title of the Unit	Content of Unit						Contact Hrs.	Mapped CO	
1	Introduction	An Introduction to Marketing Management. Nature and Scope of Marketing Management. Marketing Concepts. Elements of Marketing Management- Needs, Wants, Desire, Demands, Customer, Consumer, Markets and Marketers, Marketing Vs Selling, Consumer Markets and Industrial Markets.						7	1	
2	Market Analysis	The Marketing Research System - Definition of MR - Basic and Applied Research – The Marketing Research Process. Marketing Environment-Micro and Macro components and their impact on Marketing Decision Analyzing needs and trends in political, economic, socio-cultural and technical environment- PEST Analysis.						8	2	
3	Market Selection	Definition, Need and Benefits of Market Segmentation. Bases for Market Segmentation. Niche Marketing. Target Markets, Positioning and differentiation Marketing Mix and Extended Marketing Mix.						7	3	
4	Product & price Decisions	Product Decision- Concept of a Product; Classification of Products; Major Product Decision; Product Line and Product Mix; Branding; Packaging and Labeling; Product Life Cycle-Strategic Implications; New Product Development Price Decision- Concept and meaning of Price and Pricing, Significance of Pricing Decision, Factors affecting Price, Determination; Pricing Policies and Strategies						7	4	
5	Promotion & distribution Decisions	Place Decision- Nature, Functions, and Types of Distribution channels; Distribution channel Intermediaries; Channel Management Decisions, Marketing Channel System-functions and flows. Promotion Decision-Communication Process; Promotion Mix, Advertising, personal selling, sales promotion, publicity and public relations; Media Selection; Advertising effectiveness; Sales promotion tools and techniques						6	5	
Reference Books:										
1. Kotler, Philip, Marketing Management, Person Education Pvt. Ltd., New Delhi. Edition-14 <sup>th</sup> .										
2. Saxena, Rajan., Marketing Management, Tata McGraw Hill, New Delhi. Edition-3 <sup>rd</sup> .										
3. Ramaswamy, V. Sand Namakumari, S., Marketing Management, Macmilan India, New Delhi. Edition-4 <sup>th</sup>										
4. Lamb, Hairand Dannel. M.C.(2004). Marketing.(7 <sup>th</sup> ed.). Thomson										
5. Evans and Berman.(2005).Marketing.(2 <sup>nd</sup> ed.). Biztantra										
e-Learning Source:										
Marketing Management Course Marketing Management relates to Marketing Business, Udemy, <a href="https://www.udemy.com/topic/marketing-management/">https://www.udemy.com/topic/marketing-management/</a>										
Marketing Fundamentals Courses, Udemy, <a href="https://www.udemy.com/courses/marketing/marketing-fundamentals/">https://www.udemy.com/courses/marketing/marketing-fundamentals/</a>										
Marketing Management- I By Prof. Jayanta Chatterjee, Prof. Shashi Shekhar Mishra   IIT Kanpur, Swayam, <a href="https://onlinecourses.nptel.ac.in/noc22_mg57/preview">https://onlinecourses.nptel.ac.in/noc22_mg57/preview</a>										
Marketing Management-II Indian Institute of Technology Kanpur and NPTEL via Swayam Help, <a href="https://www.classcentral.com/course/swayam-marketing-management-ii-12989">https://www.classcentral.com/course/swayam-marketing-management-ii-12989</a>										

PO- PSO CO	Course Articulation Matrix: (Mapping of Cos with Pos and PSOs)								
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	2	2	1	1	2	2	1	2	1
CO2	2	1	1	1	1	2	2	1	1
CO3	2	1	1	1	1	2	1	2	1
CO4	2	1	1	1	2	2	1	1	2
CO5	2	1	1	2	1	2	1	1	1

**1-Low Correlation; 2-Moderate Correlation; 3- Substantial Correlation**

<b>Name &amp; Sign of Program Coordinator</b>				<b>Sign &amp; Seal of HoD</b>			
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## Integral University, Lucknow

<b>Effective from Session:2020-21</b>							
<b>Course Code:</b>	BM 405	<b>Title of the Course</b>	Human Resource Management	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year:</b>	I	<b>Semester:</b>	I	3	0	0	3
<b>Pre-Requisite:</b>	None	<b>Co-requisite:</b>	None				
<b>Course Objectives</b>	The Course aims at familiarizing the students with various aspects of HRM. The basic objective is to help the students to acquire and develop decision-making skills in relation to managing human resources of the organization. To understand HR Functions as a Strategic Partner in the formulation and implementation of Companies Strategies						

<b>Course Outcomes</b>	
<b>CO1</b>	To understand the conceptual background of HRM, its evolution and present role in organizational structure. This unit exhibits the overall importance of various functions of HRM in organizational functioning.
<b>CO2</b>	To understand the philosophy of HRM, characteristics of HR policy in framing HRM background. This Unit explains the gravity of HRP model and job analysis in deciding the future an organization.
<b>CO3</b>	To understand the outcomes of external and internal recruitment techniques and selection process. The concept of testing and the importance of varied test used in selection.
<b>CO4</b>	To Understand the role of training and development, performance appraisal and, job evaluation in managing Human resources. The importance of TNA in the success of training and development.
<b>CO5</b>	To understand job-based compensation scheme, emerging horizons of HRM like e-HRM a, enduring international HRM, role of HRIS in the context of present business environment, strategies of HRM and its synchronization with business strategies.

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Content of Unit</b>	<b>Contact Hrs.</b>	<b>Mapped CO</b>
1	An Introduction	HRM: Definition, Meaning, Objective, Importance & Scope. Evolution of HRM, Functions of HRM. HR Sub Systems. Organization Structure of HRM	7	1
2	Policy & Planning	HRM Philosophy. HRM Policy: Meaning Definition, Importance, Characteristics of Good HR Policy. Human Resource Planning Model, Barriers of HR Planning, Job Analysis Job Description & Job Specification.	7	2
3	Recruitment & Selection	Concept of Recruitment: Meaning, Definition, Importance, Recruitment Process and Barriers. Concept Of Selection: Meaning, Definition, Importance, Selection Process and Barriers. Sources of Testing: Aptitude test, Personality test, simulation exercises. Assessment Centre. Induction Programme.	7	3
4	Training & Development, Performance Appraisal	Training and Development Concept of Training & Development, Training Process, Identification of Training needs & setting Objective, Training Methods, Designing a Training Programme. Performance Appraisal Concept of Performance Appraisal System, Methods of Performance Appraisal system. Job Evaluation: Scope. Process and methods of job evaluation	7	4
5	Compensation & Macro View of HRM	Objective of compensation strategy, Components of remuneration: Wages & Salary, Incentives, Fringe Benefits, Non- Monetary Benefits Multi-dimensional Approach to compensation, Types Payment System, Macro View of HRM HR in India and International HRM basic concepts, Linkage between Corporate Strategy & HRM Strategy, Emerging Trends In Human Resource Management	7	5

### Reference Books:

Human Resource Management, Excel books: Rao V.S.P.

Edwin Flippo. (1996). Personnel Management and industrial relations. McGraw Hill.

Human Resources Management, written by Gary Dessler Latest edition.

HR from the Outside In: Six Competencies for the Future of Human Resources Dave Ulrich,

### e-Learning Source:

[https://onlinecourses.nptel.ac.in/noc20\\_mg15/preview](https://onlinecourses.nptel.ac.in/noc20_mg15/preview)

<https://in.coursera.org/specializations/human-resource-management>

<https://www.careers360.com/courses-certifications/swayam-human-resource-management-courses-brp-org>

### Course Articulation Matrix: (Mapping of COs with POs and PSOs)

<b>PO-PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>
<b>CO1</b>	1	1	1	-	1	2	2	1	--
<b>CO2</b>	2	2	-	1	-	-	-	--	1
<b>CO3</b>	1	2	2	3	-	1	1	-	1
<b>CO4</b>	2	3	1	-	1	1	-	-	-
<b>CO5</b>	1	1	-	1	1	-	1	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code	BM 471	Title of the Course	Strategic Supply Chain Management	L	T	P	C
Year	I	Semester	I	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	The objective of the course is to provide students with an understanding of the supply chain management principles and practices, and to develop their knowledge and skills in supply chain strategy development, supply chain risk management, performance measurement, and sustainability in supply chain management.						

Course Outcomes	
CO1	Discuss the concept and components of supply chain management.
CO2	Identify and describe different types and flows in a supply chain.
CO3	Analyze and make strategic decisions related to supply chain management.
CO4	Identify key drivers and metrics of supply chain performance.
CO5	Design and implement global supply chain networks effectively.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Overview of Supply Chain	Evolution of Supply Chain, Uncertainty & Risk, Key Issues in Supply chain management, Key Issues in Supply chain management, Objectives of Supply Chain, Lean and Agile Supply Chains	9	
2	Flows and Types of SCM	Supply Chain Flow – Upstream & Downstream, Flow of Finance Flow Across Supply Chain & Significance, Flow of Product Across Supply Chain, The Flow of Information Across Supply Chain, Made-To-Stock Supply Chain Strategy, Built-To-Order Process in Supply Chain, Assemble-To-Order Model, Engineer-To-Order model	9	
3	Supply Chain Strategic Decisions	Competitive Supply Chain Strategy, Achieving Strategic Fit, Challenges in Achieving & Maintaining Fit, Make or Buy Decision, The Offshoring Decision: Total Cost, Framework For Strategic Alliance, Retailer Supplier Partnership, Push v/s Pull System, Supply Chain Strategy, Managing Bullwhip Effect	9	
4	Performance Metrics and Drivers in SCM	Drivers of Supply Chain Performance, Framework for Structuring Drivers, Factors Influencing Distribution Network Design, Sales and the Distribution Network, Distribution Networks in Practice, Impact of Globalization on Supply Chain Networks, Key Performance Indicators (KPIs) in SCM	9	
5	Supply Chain Risk Management and Sustainability	Overview of Supply Chain Risk Management, Risk Identification and Assessment, Risk Mitigation Strategies, Supply Chain Resilience, Supply Chain Security Management, Sustainability in Supply Chain Management, Sustainable Supply Chain Practices	9	

References Books:
Supply Chain Management: Strategy, Planning, and Operation by Sunil Chopra and Peter Meindl, published by Pearson Education.
Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies by David Simchi-Levi, Philip Kaminsky, and Edith Simchi-Levi, published by McGraw-Hill Education.
Global Logistics and Supply Chain Management by John Mangan, Chandra Lalwani, and Tim Butcher, published by John Wiley & Sons.
Supply Chain Logistics Management by Donald Bowersox, David Closs, and M. Bixby Cooper, published by McGraw-Hill Education.
Supply Chain Management: A Strategic Perspective by Rahul V. Altekar and Satish N. Kulkarni, published in the International Journal of Engineering and Management Research.
e-Learning Source:
Supply Chain Foundations, LinkedIn
Supply Chain Basics for Everyone, LinkedIn
Supply Chain Management KPIs: Metrics Inventory Performance, Udemy
Supply Chain Management By Dr.P.Chitramani, Swayam



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PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	2	1	1	-	-	3	1	2	1
CO2	3	1	2	1	2	-	-	3	1	2	1
CO3	3	2	2	2	2	-	-	3	2	2	2
CO4	3	2	2	1	2	-	-	3	1	2	1
CO5	3	3	2	1	3	-	-	3	2	3	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code	BM 472	Title of the Course	Procurement and Inventory Management	L	T	P	C
Year	I	Semester	I	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	To impart an understanding of procurement, its functions, and provide knowledge of critical issues related to inventory management in the current coordinated and collaborative supply chain environment.						

Course Outcomes	
CO1	Describe the process of purchasing in supply chain management.
CO2	Apply strategic sourcing and procurement principles to supply chain management.
CO3	Analyze pricing and revenue management strategies in procurement.
CO4	Implement effective inventory management techniques.
CO5	Use inventory control methods to optimize supply chain performance.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Purchasing Function	Overview of Purchasing Function, Purchasing Importance, Purchasing Principles, Importance of Seller-Buyer Relations, Negotiation, Factors of Negotiation, Codification, Price Analysis	9	
2	Sourcing and Procurement	Sourcing in Supply Chain, Supplier Selection - Auction, Supplier Selection - negotiation Contract, Procurement Process, Types of RFP & RFQ, Risk Management in Sourcing	9	
3	Key Role of Pricing and Revenue Management	Role of Pricing & Revenue Management in SCM, Pricing & Revenue Management for Perishable Assets, Pricing & Revenue, Management for Perishable Assets Case study, Pricing & Revenue Management for Seasonal Demand - Case study, Pricing & Revenue Management for Bulk & Spot Contract	9	
4	Inventory Management	Introduction to Inventory Management, Function & Types, Components of Inventory, Inventory Cost, Need to Hold Inventory, Inventory Models	9	
5	Inventory Control Techniques	Inventory Control, Meaning, Objectives & Benefits of Inventory Control, ABC Inventory Planning, Inventory Accuracy and Cycle Counting, Managing inventory uncertainty, Safety in inventory Standardisation: Advantages, Disadvantages	9	

References Books:
Procurement and Supply Chain Management by Arjan J. van Weele, published by Cengage Learning.
Inventory Management: Principles, Concepts and Techniques by Vinod V. Sople, published by Pearson Education.
Operations and Supply Chain Management for MBA by Vikas Kumar, published by Oxford University Press.
Inventory Management: Theory and Practice by V. R. V. Rao, published by Excel Books.
BASICS OF STRATEGIC SOURCING By Selvan Athishtaraj V, Notion Press
e-Learning Source:
Procurement Management, LinkedIn
Inventory and Store Management in Construction Industry, Swayam
Inventory Management A-Z: Supply Chain & Business Operations, Udemy



## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	2	1	1	-	-	3	1	2	1
CO2	3	2	2	2	2	-	-	3	2	2	2
CO3	3	2	2	2	2	-	-	3	2	2	2
CO4	3	1	2	1	2	-	-	3	1	2	1
CO5	3	2	2	1	2	-	-	3	2	2	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code	BM 474	Title of the Course	Logistics and Transportation Planning	L	T	P	C
Year	I	Semester	I	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	Provide students with an understanding of logistics management principles and practices, and to develop their knowledge and skills in freight planning, transportation management, warehouse operations, and the use of IT tools for logistics management.						

Course Outcomes	
CO1	Describe the role and importance of logistics in supply chain management.
CO2	Analyse the various modes of freight transport and their advantages and disadvantages.
CO3	Apply maritime transport and intermodal equipment to logistics and transportation planning.
CO4	Analyse the transportation network analysis to optimize logistics and transportation performance.
CO5	Utilize logistics and transportation IT solutions to enhance supply chain performance.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Overview of Logistics	Introduction to Logistics, Logistics Management, Inter-Relation Between Supply Chain and Logistics, 7R, Customer service and logistics, Two conceptual models of service quality, Measuring customer service, Key issues, and challenges for logistics: The external environment, Manufacturing and supply, Key issues and challenges for logistics: Distribution, Retailing, Consumer, Functions of Logistics	9	
2	Transportation and Freight Planning	Road freight transport: Vehicle Selection, Vehicle Costing, Main vehicle types, Types of operation, Road freight transport: Planning and Resourcing, Vehicle routing and scheduling issues, Rail Transport: Overview of Rail transport, strengths and weaknesses, Air Transport: Air cargo handling, Types of air freighter, Documentation	9	
3	Network Analysis in Transportation	Transportation Problem: Northwest Corner method, Minimum cost method, Column Minimum Method, Transportation Problem: Row Minimum Method, Network Analysis , The role of distribution Centers and Warehouses	9	
4	Warehouse Management and Operations	Introduction to Warehouse Management, Warehouse Design and Layout, Inventory Management in Warehousing, Role of distribution Centers and Warehouses, Warehouse Operations Management, Safety and Security in Warehousing, Material Handling Techniques	9	
5	Role of IT in Logistics	Role of Supply Chain Information Technology, Warehouse management systems, Overview of Forecasting and inventory management systems, Role of Information, Technology in Logistics, EDI, RFID, Bar-coding & Scanning, Customer Relationship Management in logistics, Transport Management System – Overview & functions	9	

References Books:	
Supply Chain Management: Strategy, Planning, and Operation (Global Edition) by Sunil Chopra and Peter Meindl, published by Pearson Education Limited.	
Logistics and Transportation: Concepts and Practices by R. Sivakumar, published by PHI Learning Private Limited.	
Logistics Management: Text and Cases by Vinod V. Sople, published by Pearson Education.	
Logistics and Supply Chain Management by Martin Christopher, published by Pearson Education.	
Logistics and Supply Chain Management for MBA by Vikas Kumar, published by Oxford University Press.	
e-Learning Source:	
Operations and supply chain management, Swayam	
Understanding Logistics, LinkedIn Learning	
Fundamentals of Logistics, Supply Chain & Customer Service, Udeemy	
Supply Chain Management, By Dr.P.Chitramani, Swayam	



## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	1	1	2	-	-	3	1	2	1
CO2	3	2	2	1	2	-	-	3	2	2	2
CO3	3	2	2	1	2	-	-	3	2	2	2
CO4	3	2	2	1	2	-	-	3	2	2	2
CO5	3	2	2	1	3	-	-	3	2	2	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University, Lucknow

**Effective from Session: 2023-24**

<b>Course Code</b>	BM 406	<b>Title of the Course</b>	Business Research Methods	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	I	<b>Semester</b>	II	3	1	0	4
<b>Pre-Requisite</b>	None	<b>Co-requisite</b>	None				
<b>Course Objectives</b>	The objective of the course is to inform the students about the basic concepts of research methods. This paper helps the students in doing research through forming research design, collecting data, performing sampling and at the end analyzing the data. This paper also helps in knowing the application of statistical tools to arrive at rationale decisions. It also helps in the use of SPSS in Statistical Operations & Hypothesis Testing.						

### Course Outcomes

<b>CO1</b>	To know the basics of Research and to formulate the Research Problem. To know the way of forming the Research Objective & Research Hypothesis. It also informs the concept of Feasibility Study & making Research Proposal.
<b>CO2</b>	To understand the concept of Research Design & to study its classification. It also helps in understanding the concept of Measurement. It also informs about Scales and its uses.
<b>CO3</b>	To apply the use of Primary & Secondary Data in conduction of the Research. It also helps in knowing the art of making a Questionnaire for the Research and the way of Testing Questionnaire through Pilot Study.
<b>CO4</b>	To know the way of applying the Sampling in Research and to know the calculation of Sample Size. To know the application of Data Preparation & Data Analysis.
<b>CO5</b>	To evaluate statistical analysis, this includes Parametric and Non-Parametric Test and prepares research report. To report Research Findings & study Ethical Issues related to Publishing, Plagiarism and Self-Plagiarism.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	<b>Business Research</b>	Research: Meaning & Definition, Importance of Research, Role of Research, Measures of Good Research, Research Process, Research in Business, Manager-Researcher Relationship, Defining Research Problem, Making Research Objective and Formulation of Hypothesis, Feasibility Study and Research Proposal.	9	1
2	<b>Research Design, Measurement &amp; Scales</b>	Research Design: Types of Research Design-Exploratory, Descriptive and Experimental Studies. Concept of Measurement, Measurement of Attitudes, Problems in Measurement, Concept of Validity & Reliability, Scales of Measurement: Their Types & Properties.	8	2
3	<b>Data Collection Techniques and Questionnaire Design</b>	The Sources and Collection of Data: Primary and Secondary Data Sources, Primary Data Collection by Observation, Interview, Questionnaire & Other Specialized Methods. Difference between Questionnaire & Schedule, Questionnaire Design and Testing of Questionnaire through Pilot Study	9	3
4	<b>Sampling, Data Preparation &amp; Data Analysis</b>	Sampling: General Concepts of Sampling, Sampling Procedures, Types of Sampling, Sample Size Determination, Practical Considerations in Sampling and Sample Size, Common Sources of Error in Sampling, Sampling Theory & Central Limit Theorem, Kaise-Meyer-Olkin Test (KMO Test), Data Preparation & Data Analysis.	9	4
5	<b>Statistical Analysis, Hypothesis Testing, SPSS, Reporting Research Findings &amp; Ethical Issues</b>	Statistical applications: Central Tendency & Dispersion, Hypothesis Testing: Parametric and Non-Parametric Test, Parametric Test- t-test, z-test and ANOVA and Non-Parametric Test- Chi Square Test, Kruskal-Wallis, Kolmogorov-Smirnov Test, Mann-Whitney U Test, Introduction to SPSS. Interpretation of Results, Steps in Research Report, Research Report Guidelines, Reporting Research Findings, Differences between Academic and Business Audience/ Ethical issues related to Publishing, Plagiarism and Self-Plagiarism.	10	5

#### Reference Books:

1. Dipak Kumar Bhattacharyya, Research Methodology, Latest Edition, Excel Books
2. C R Kothari, Research Methodology, Second Revised Edition, New Age International Publishers
3. Donald Cooper & Pamela Schindler, Business Research Methods, 12th Edition, McGraw Hill
4. Dr. Deepak Chawla & Dr. Neena Sondhi, Research Methodology: Concepts & Cases, 2<sup>nd</sup> Edition, Vikas Publishing House

#### e-Learning Source:

[https://onlinecourses.swayam2.ac.in/cec20\\_mg14/preview](https://onlinecourses.swayam2.ac.in/cec20_mg14/preview)

<https://www.coursera.org/browse/physical-science-and-engineering/research-methods>

#### Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
<b>CO1</b>	3	3	1	1	1	2	2	3	3
<b>CO2</b>	3	3	1	1	1	2	2	2	2
<b>CO3</b>	3	3	1	2	3	1	1	3	3
<b>CO4</b>	1	3	3	1	2	1	1	3	3
<b>CO5</b>	2	3	3	1	2	1	1	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University, Lucknow

Effective from Session: 2020-21										
Course Code		BM407	Title of the Course		Financial Management		L	T	P	C
Year		I	Semester		II		3	1	0	4
Pre-Requisite		None	Co-requisite		None					
Course Objectives		This is the foundation course in the area of Finance in order to acquaint a student to use various decision-making tools of finance in a business organization for the efficient utilization of financial resources.								
Course Outcomes										
CO1	Explain the nature and scope of financial management as well as time value of money and risk return trade off									
CO2	Analyze capital budgeting process and capital budgeting techniques									
CO3	Describe various capital structure theories and estimating cost of capital and leverage analysis.									
CO4	Evaluating working capital requirement and management									
CO5	Understanding the determinants of dividend decision in relation to various models of dividend policy									
Unit No.	Title of the Unit	Content of Unit						Contact Hrs.	Mapped CO	
1	Introduction	Introduction, Meaning, scope and development of financial management; Finance Function; Objectives of the Firm, Indian financial system, Risk and Return, Time value of Money and its relevance, computation of EMI, Annuity, Annuity due.						9	1	
2	Capital Investment Decisions	Capital Budgeting: Meaning, Process and Significance, Methods of project evaluation and selection: ARR, Payback and discounted payback, NPV, IRR, Benefit cost ratio and Terminal value Method, risk analysis in investment, Sensitivity Analysis.						10	2	
3	Financing Decisions	Cost of Capital: Cost of Equity, Debt, Retained Earnings and Overall Cost of Capital, Operating and Financial Leverages: Concept and significance, EBIT-EPS analysis, Capital structuring Theories: Net Income approach, Net Operating Income approach and MM approach.						9	3	
4	Working Capital Decisions	Working Capital: Meaning and significance, working capital cycle, Working capital Management, overall considerations in WCM; determinants and determination of working capital requirements; management of cash; management of receivables management of Inventories.						10	4	
5	Dividend Decisions	Ploughing back of profits forms of dividends, factors affecting dividend policy, Retained Earning Vs. Dividend Decision; Walter Model; Gordon Model; MM hypothesis. Contemporary issues in financial management.						7	5	
Reference Books:										
Chandra P., Financial Management: Theory and Practice, 7th Edition, Tata McGraw Hill, New Delhi.										
Van Horn James C, Financial Management and Policy, Prentice Hall of India, New Delhi.										
Khan YM and Jain PK, Financial Management - Text and Problems, 5th Edition, Tata McGraw Hill Publishing Company Ltd, New Delhi.										
Reddy G.S., Financial Management: Theory and Practice, 2nd Edition, Himalayan Publications, New Delhi										
Michael C. Ehrhardt and Eugene F. Brigham. (2008). Corporate Finance. (1st ed.). South-Western Pub										
e-Learning Source:										
Financial Management Specialization ( <a href="https://in.coursera.org/specializations/financial-management">https://in.coursera.org/specializations/financial-management</a> )										
Financial Management ( <a href="https://www.classcentral.com/course/swayam-financial-management-17605">https://www.classcentral.com/course/swayam-financial-management-17605</a> )										
Fundamentals of Financial Management ( <a href="https://www.classcentral.com/course/swayam-fundamentals-of-financial-management-17618">https://www.classcentral.com/course/swayam-fundamentals-of-financial-management-17618</a> )										

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)								
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	2	1	2	1	1	2	2	1	1
CO2	2	2	2	2	2	2	1	2	1
CO3	2	1	1	2	1	2	1	1	1
CO4	2	1	1	2	1	2	1	1	1
CO5	2	2	2	2	2	2	1	2	1

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

<b>Name &amp; Sign of Program Coordinator</b>	<b>Sign &amp; Seal of HoD</b>
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## Integral University, Lucknow

**Effective from Session: 2023-24**

Course Code	BM408	Title of the Course	Organisational Behaviour	L	T	P	C
Year	I	Semester	II	3	0	0	3
Pre-Requisite	None	Co-requisite	None				
Course Objectives	The objective of the paper is to familiarize the students with basic management concepts and behavioral processes in the organization						

### Course Outcomes

CO1	To know about the basic concepts of the organization. It will help them to know the challenges and opportunities of the subject.
CO2	To understand the fundamentals and determinants of individual behavior. It will help them to understand the role and impact of individual behavior on organizational behavior.
CO3	To acquire knowledge about behavioral aspects like learning and motivation in the light of modifying individual behavior at workplace.
CO4	To learn about the concepts of the group & interpersonal dimensions and also to know about its importance for the organization.
CO5	To empower the students with the knowledge of latest trends and developments in the field of organizational behavior.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	<b>Foundations of Organizational Behavior</b>	The Nature and Functions of an Organization; Meaning and systematic study of O.B; Contribution of Behavioral Sciences to O.B; Developing Contingency Model to OB; Challenges and Opportunities in O.B.	6	1
2	<b>Individual Dimensions in Organizational Behavior</b>	Basic Individual Differences (ability & biographical characteristics); Personality: Meaning, Theories and Determinants; Values; Attitudes and job Satisfaction; Perception Process.	7	2
3	<b>Foundation of Learning and Motivation</b>	Learning process; Theories of Learning: Classical Conditioning, Operant Conditioning and Social Learning; Motivation: Meaning, Theories of motivation-Maslow, Herzberg, McClelland, McGregor; Process Theories (Vroom's Model); Contemporary Theories: Equity Theory, Attribution Theory).	7	3
4	<b>Group and Interpersonal Dimensions</b>	Formation, Classification, Stages and Group Dynamics; Group Decision Making; Teams and Teamwork; Transactional Analysis; Stress and Conflict: Meaning and Causes of Stress, Types of Conflict (Intra Individual & Interactive), Coping Strategies for Stress and Conflict Leadership: Meaning, Style and Theories of Leadership-Trait, Behavioral and Situational Theories	8	4
5	<b>Organizational Dimensions and recent trends</b>	Organizational Culture: Concept, Characteristics, Elements of Culture, Implications of Organization Culture, Organizational Change, Organizational Development, Gender Sensitivity, Competency Levels & Behavioural Dimensions, Culture based influences in International OB, Relationship Orientation for improved productivity & lack of formal authority.	7	5

### References Books:

Davis, Keith: Organizational Behaviour, Tata McGraw Hill. Edition-5th.

Robins, S.P and Sanghi, S.: Organizational Behaviour, Pearson Edition, New Delhi, Edition-13th.

Prasad, L.M.: Organizational Theory and Behaviour, HPH, New Delhi. Edition-3<sup>rd</sup>

Michael C. Ehrhardt and Eugene F. Brigham. (2008). Corporate Finance. (1st ed.). South-Western Pub

### e-Learning Source:

<https://archive.nptel.ac.in/courses/110/106/110106145/>

<http://www.digimat.in/nptel/courses/video/110106145/L01.html>

### Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	1	2	2	1	1	2	-	1	1
CO2	2	2	2	1	-	1	1	2	-
CO3	-	1	2	-	1	-	1	2	1
CO4	1	-	2	-	-	1	-	-	2
CO5	1	1	-	2	1	-	1	2	1

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code		Title of the Course	Global Supply Chain Management	L	T	P	C
Year	I	Semester	II	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	Impart an understanding of procurement, its functions, and provide knowledge of key issues related to Inventory management in the coordinated and collaborative global supply chain environment.						

Course Outcomes	
CO1	Discuss the principles of international business.
CO2	Describe trade barriers and their impact on international supply chains.
CO3	Analyze EXIM and freight forwarding processes in international supply chain management.
CO4	Evaluate the role of international trade bodies in global supply chain management.
CO5	Identify and compare different international transport and service providers.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Introduction to International Business	Global Business Environment, Importance of International Business, Problems and risks involved in Int. business & solutions, Case Study, International marketing and sales channel	9	1
2	Trade Barriers	Tariff, Quotas & non-tariff barriers: Definitions & types, Economic effects of Tariff & Quotas on national income, Political economy of non-tariff barriers and their implication, Case study Discussion, Regulatory Authorities & Government Policies, Role of Department of Commerce & Finance Ministry, Trade barriers - Case study discussion, Balance of Payments and Balance of Trade: Meaning & components	9	2
3	EXIM and Freight Forwarding	Elements of export & import contract, Procedure & Documents required for shipment of cargo, Multimodal Transport, Letter of Credit & other payment terms, Methods of payment & risks, Case study, Export procedures and documents, Import procedures and documents, Bill of Lading & its types, INCOTERMS	9	3
4	International Trade Bodies	SAARC/SAPTA, ASEAN, Regionalism: EU & NAFTA, Multilateralism & WTO, Case study Discussion, Functions of GATT, UNCTAD, IMF, World Bank & Asian Development Bank	9	4
5	International Transport & Different Service providers	Services offered by various service providers in international business-Freight Forwarders, CHA, NVOCC, Freight rates, Surcharge & basis of calculation, Cargo (marine) insurance, Credit insurance, Modes of international transport – Risk & differentiation in services provided, Packing and marking, Case study	9	5

References Books:	
Global Logistics and Supply Chain Management by John Mangan, Chandra Lalwani, and Tim Butcher, published by John Wiley & Sons.	
Supply Chain Management: Concepts, Techniques and Practices by S. Anil Kumar and N. S. Viswanathan, published by Prentice-Hall of India	
Operations and Supply Chain Management for MBA by Vikas Kumar, published by Oxford University Press.	
Supply Chain Management: Strategy, Planning, and Operation (Global Edition) by Sunil Chopra and Peter Meindl, published by Pearson Education Limited.	
Global Supply Chain Management and International Logistics by Alan E. Branch, published by Routledge.	
e-Learning Source:	
International Logistics, LinkedIn Learning	
Operations and supply chain management, By Prof. G. Srinivasan, Swayam	
Global Air Logistics Management in Supply Chain Management, Udemy	



## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	2	1	2	-	-	3	2	2	1
CO2	3	2	1	2	1	-	-	3	2	1	1
CO3	3	2	2	1	2	-	-	3	2	2	1
CO4	3	2	2	1	2	-	-	3	2	2	1
CO5	3	2	2	1	2	-	-	3	2	2	1

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code		Title of the Course	Supply Chain Modelling and Design	L	T	P	C
Year	I	Semester	II	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	Impart knowledge about various processes utilized to understand and enhance an organization's supply chain. The course focuses on unique supply chain requirements tailored to different types of businesses, maximizing unpredictable demand, and achieving efficiency in competitive markets.						

Course Outcomes	
CO1	Analyze and design distribution networks and applications in supply chain management.
CO2	Apply demand management and forecasting techniques in supply chain management.
CO3	Implement aggregate sales and operational planning in supply chain management.
CO4	Design and plan transportation networks to enhance supply chain performance.
CO5	Evaluate supply chain performance measurement techniques.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Designing Distribution Networks and Applications	Role of Distribution in the Supply Chain, Factors Influencing Distribution Network Design, Design Options for a Distribution Network, Online Sales and the Distribution Network, Distribution Networks in Practice	9	1
2	Demand Management & Forecasting	Role & Characteristics of Forecasting in a Supply Chain, Components of a Forecast and Forecasting Methods, Time-Series Forecasting Methods, Measures of Forecast Error, Selecting the Best Smoothing Constant	9	2
3	Aggregate Sales & Operational Planning in Supply Chain	Overview of Sales and Operations Planning Activities, The Aggregate Operations Plan, Aggregate Planning Techniques, Yield Management, The Role of IT in Aggregate Planning, Implementing Aggregate Planning in Practice	9	3
4	Designing and Planning Transportation Networks	Supply Chain Design for Logistics Service Providers, Modes of Transportation and Their Performance Characteristics, Transportation Infrastructure and Policies, Design Options for a Transportation Network, Trade-Offs in Transportation Design, Risk Management in Transportation	9	4
5	Supply Chain Performance Measurement Techniques	Drivers of Supply Chain Performance, Supply Chain Performance Attributes, SCOR MODEL, Balanced Scorecard Approach, Supply Chain Performance Measurement for Third Party logistics	9	5

References Books:	
Designing & Managing the Supply Chain Paperback by David Simchi-Levi	
Supply Chain Design and Management Strategic and Tactical Perspectives By Manish Govil, Jean-Marie Proth	
Modeling the Supply Chain Paperback by Jeremy F. Shapiro - Massachusetts Institute of Technology	
Modeling Supply Chain Dynamics: A Multiagent Approach by Jayashankar M. Swaminathan	
Modeling the Supply Chain Paperback by Jeremy F. Shapiro - Massachusetts Institute of Technology	
e-Learning Source:	
Modelling and Analytics for Supply Chain Management, By Prof. Kunal Kanti Ghosh, Prof. Anupam Ghosh, Swayam	
Logistics and Supply Chains - Fundamentals, Design, Operations, Udemy	
Supply Chain Management By Dr.P.Chitramani, Swayam	





## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	2	1	2	-	-	3	2	2	1
CO2	3	1	1	1	1	-	-	3	2	1	1
CO3	3	2	2	1	2	-	-	3	2	2	1
CO4	3	2	2	1	2	-	-	3	2	2	1
CO5	3	1	1	1	1	-	-	3	1	1	1

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25							
Course Code	BM 477	Title of the Course	Principles of ERP	L	T	P	C
Year	I	Semester	II	3	0	-	3
Pre-Requisite		Co-requisite					
Course Objectives	Equip students with a comprehensive understanding of Enterprise Resource Planning (ERP) systems. The course will enhance their grasp of business process management, varied ERP modules, the intricate nuances of ERP project management, and the design plus configuration of ERP systems.						

Course Outcomes	
CO1	Describe the development and evolution of ERP systems.
CO2	Analyze marketing information systems and sales order processes in ERP systems.
CO3	Evaluate production and supply chain management information systems in ERP.
CO4	Explain the accounting and human resources processes in ERP systems.
CO5	Implement company-wide ERP systems effectively.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Development of ERP Systems	Functional area information systems, Evolution of information systems, ERP software emerges: SAP and R/3 process, ERP for mid-sized, ERP for smaller companies, Choosing consultants and vendors, Choosing consultants and vendors 1, Significance of ERP software and systems, Benefits of ERP software and systems	9	1
2	Marketing Information Systems and Sales Order Process	Sales and Distribution in ERP, Sales, and Distribution in ERP, A Standard Order Cycle in ERP, Customer Relationship Management (CRM)	9	2
3	Production and Supply Chain Management Information Systems	Production Planning Process in ERP, Approach to Production Planning, Pre material requirement planning (MRP stage), MATERIALS REQUIREMENTS PLANNING (MRP), MRP- I, Pre material requirement planning (MRP stage), MATERIALS REQUIREMENTS PLANNING (MRP), MRP- II, ERP and Suppliers	9	3
4	Accounting and Human Resources Processes in ERP Systems	Accounting Activities, Operational, Decision-making Problem: Credit Management, Accounting Activities, Operational Decision-making Problem: Credit Management, Human Resources with ERP software, Advanced ERP Human Resources features, Additional Features	9	4
5	Company-Wide Implementation	Company Wide Implementation - Overview, Getting Ready, Project Launch, Initial Education, Process Definition, Going on the Air - Basic ERP (Phase I), Going on the Air - Supply Chain Integration (Phase II), Quick-Slice ERP - Implementation	9	5

References Books:	
ERP: Concepts and Practice by Vinod Kumar Garg and N. K. Venkitakrishnan, published by PHI Learning Private Limited.	
Enterprise Resource Planning: Concepts and Practice by V. K. Garg and N. K. Venkitakrishnan, published by PHI Learning Private Limited.	
Enterprise Resource Planning by Alexis Leon, published by Tata McGraw-Hill Education.	
ERP: Tools, Techniques, and Applications for Integrating the Supply Chain by Carol A. Ptak and Elizabeth A. Smith, published by CRC Press.	
Enterprise Resource Planning by Mary Sumner, published by Pearson Education.	
e-Learning Source:	
Operations Management By Prof. Inderdeep Singh, Swayam	
Managing Enterprise Resource Planning (ERP) Implementation, Udemy	
Learning SAP MM (Materials Management), LinkedIn Learning	



## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	1	2	1	2	-	-	3	2	1	1
CO2	3	2	2	1	2	-	-	3	2	2	1
CO3	3	2	2	1	2	-	-	3	2	2	1
CO4	3	2	2	1	2	-	-	3	2	2	1
CO5	3	3	3	2	3	-	-	3	3	3	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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## Integral University,

Effective from Session: 2023-25

Course Code	BM479	Title of the Course	Workshop on Advanced Technology and Digital Supply Chain	L	T	P	C
Year	I	Semester	II	0	1	-	1
Pre-Requisite	None	Co-requisite	None				
Course Objectives	Equip participants with in-depth knowledge and expertise in utilizing advanced technologies to drive digital transformation in supply chain management. The focus will be on leveraging the key technological advances of our times, like blockchain, IoT, and robotics, to foster innovations in the supply chain realm.						

### Course Outcomes

CO1	Interpret and explain the different types of IoT, AI, and blockchain platforms used in supply chain management, including their benefits and limitations.
CO2	Apply knowledge and skills in advanced digital supply chain management topics, such as IoT-based monitoring, AI-driven forecasting, and blockchain-enabled traceability.
CO3	Analyze the impact of digital technologies, including IoT, AI, and blockchain, on supply chain operations and performance, illustrated with case studies.
CO4	Evaluate the effectiveness and efficiency of digital supply chain solutions through hands-on exercises, making informed decisions on their adoption and implementation.
CO5	Design and develop innovative digital supply chain solutions in hands-on exercises, leveraging technologies such as IoT, AI, and blockchain to enhance supply chain performance and competitiveness.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1	Introduction to Digital Supply Chain	Overview of the digital supply chain, Key technologies enabling digital supply chain, Industry 4.0 and its impact on digital supply chain, Benefits and challenges of the digital supply chain	3	
2	IoT in Supply Chain	Introduction to IoT in supply chain, Types of IoT devices and their applications, IoT architecture and protocols, Practical case studies and their outcomes, Hands-on exercise: Designing an IoT-enabled supply chain solution	3	
3	AI in Supply Chain	Introduction to AI in supply chain, Types of AI techniques and their applications, AI tools in supply chain management, Case studies on challenges and solutions, Hands-on exercise: Implementing an AI-driven supply chain process	3	
4	Blockchain in Supply Chain	Introduction to blockchain in supply chain, Types of blockchain and their applications, Blockchain architecture and protocols, Digital twin and simulation techniques, Hands-on exercise: Creating a blockchain-based supply chain solution	3	
5	Robotics and Automation in Supply Chain	Introduction to robotics and automation in supply chain, Types of robots and their applications, Benefits and challenges of automation, Cybersecurity threats and challenges, Hands-on exercise: Designing a robotics-driven supply chain process	3	

### References Books:

- Digital Supply Chain Management by Prashant Yadav, published by Routledge.
- Supply Chain Management: Strategy, Planning, and Operation (Global Edition) by Sunil Chopra and Peter Meindl, published by Pearson Education Limited.
- The Digital Supply Network: Transform Your Supply Chain and Gain Competitive Advantage with Disruptive Technology and Reimagined Processes by William H. Verdini, published by McGraw-Hill Education.
- The 4th Industrial Revolution: Responding to the Impact of Artificial Intelligence on Business by Mark Skilton and Felix Hovsepian, published by Kogan Page Publishers.
- The Power of Resilience: How the Best Companies Manage the Unexpected by Yossi Sheffi, published by MIT Press.

### e-Learning Source:

- Blockchain Basics, LinkedIn Learning
- Introduction to the Digital Supply Chain, Udemy
- Digital Transformation in Supply Chains, LinkedIn Learning



## Integral University,

PO PSO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO											
CO1	3	2	1	1	2	-	-	3	2	2	1
CO2	3	3	2	2	3	-	-	3	2	3	2
CO3	3	2	2	1	2	-	-	3	2	2	1
CO4	3	2	2	2	3	-	-	3	2	3	2
CO5	3	3	3	2	3	-	-	3	3	3	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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