

MPM 117**Supply Chain Management Credits 2 (2-0-0)**

Organizations increasingly rely on effective supply chains, or networks, to compete in the global market and networked economy. In the 21st century, changes in the business environment, globalization and the proliferation of multinational companies, joint ventures, strategic alliances impact significantly to market success. Secondly, technological changes, particularly the dramatic fall in information communication costs, have led to changes in coordination among the members of the supply chain network.

Objective of this course is to familiarize the student with important elements of supply chain elements in this rapidly developing specialized area of study with a focus on important elements of SCM in pharmaceutical Industry.

Unit 1- Supply Chain Management- What is SCM, Managing Uncertainty, Why Supply Chain Management, Key Issues in SCM

Unit 2- Value of Information The Bull Whip Effect and Methods of Coping with it, Effective Forecasting methods and selection criteria
Case-Vulnerability of healthcare supply chain during Covid 19

Unit 3- Network Planning- Introduction, Network Design, Potential Facility Locations and service level requirements, Key features of network configuration,

Unit 4- Procurement and Outsourcing- Introduction, A Framework for Make/ Buy Decisions, Procurement Strategies, e-procurement,

Unit 5- Customer Value- Introduction, Product Innovation, Value Added services

Unit 6- Sustainability in Supply Chain – Role of sustainability in supply Chain, Tragedy of Commons, Key Pillars of Corporate Social responsibility, Sustainability and Supply Chain Drivers, Incentives and Regulation for sustainability

Readings-

1. Simchi-Levi,D., Edith Simchi-Levi, Philip Kaminsky,Rvi Shankar **Designing and Managing the supply Chain**, Mcgraw Hill, 4e
2. Bozarth, **Introduction to Operations and Supply Chain Management**, Pearson
3. Chase, Shanker and Jacobs, **Operations and Supply Chain Management**, Mcgraw Hill
4. Chopra, s. and DharamVirKalra, **Supply Chain Management**, Pearson, 7e

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Credit: 04 (4-0-0)

Strategic Management in Pharmaceutical Industries

Objective: This course conveys the concept of strategy and its usefulness by exposing students to a variety of organizational situations. It enables students to look at organizations in their totality and appreciates the interrelationship among different functions. It will help students understand the strategy of organizations and thereby enable them in making major decisions, formulating policies and participate in implementation of corporate strategies.

Unit I Introduction:

Imperfect Competition , Perfect Competition

Gaining Advantage in War- Video supplement- Battle of Trafalgar, 10 Principles of War by Sun Tzu

Application of Strategy in Business- Strategic Management (SM) Process, Vision, Mission and Objectives and their role in guiding business decisions, Corporate, Business and Functional strategies

Overview of Indian and World Pharmaceutical Industry, Pharmaceutical Value Curve

Unit II Concept of Competitive Advantage, Above normal returns and strategy

What is competitive advantage, Roots of Competitive Advantage in I/O and RBV model, What is Strategy.

Unit III- I/O Model- Scanning the Environment for Opportunity and Threats

Environmental scanning, External Environment (PESTEL) analysis, Porters 5 Force Model, Competitive Intensity and measures of competitive Intensity, Herfindahl Index

Unit IV- Strength and Weakness

I/O Model- Porter's Value Chain, Internal and external linkages in value chain, competitive advantage by linkages in value chain

RBV Model- Resources and Competencies, Resources and 'factors of production, Ricardo's concept of returns to 'specific resources', Concept of Core Competencies

Unit V- Strategies for competitive advantage

Business and Corporate Strategy in I/O Model- Low Cost, Differentiation and Focus, Stuck-in-the-middle- Case of Kingfisher, BCG and GE Matrix,

Business and Corporate Strategy in RBV Model- The VRIO framework as source of competitive advantage, Long and Short term competitive advantage
Research and Branding as Resources and competency in Pharma Industries

Unit VI-Growth by Diversification/ takeovers/ mergers

Ansoff's Product Market matrix, Types of Mergers, Theories of Mergers, Diversification/s, Types and empirical evidence,
Diversifications and Mergers in Indian Pharmaceutical Industry

Unit VII Strategy implementation:

Strategy implementation through structure, values, and systems; McKinsey's 7sframework, Strategy and structure relationship

Suggested Readings

- 1) **Hitt, Ireland, Hoskisson. Strategic Management – Competitiveness and globalization, 12ed, Cengage India**
- 2) **Sen, Anindya. Microeconomics, 20th edi. Tata-Mcgraw Hill**
- 3) **Sun Tzu, Art of War, Jaico Publishing House; 2010, ISSN 9788184950885**
- 4) **Barney, J.B and William S Hesterly, Strategic Management and Competitive Advantage, 5ed, Pearson India**
- 5) **Weston, JF, M.Mitchel, J.H. Mulherin, P Salwan, Take Over Restructuring and Corporate Governance, 4th Ed. Pearson India**
- 6) **Ghosal, S, G. Piramal, C.A. Bartlet. Managing Radical Change, 2002, Penguin India**

MPM119 Management of Innovations & Entrepreneurship Credit: 04 (4-0-0)

Objectives:

The objective of this course is to equip students with the basic understanding of entrepreneurship development and to enable them to provide an insight into the entrepreneurship development and new venture management.

Unit I Development of entrepreneurship:

Challenges of entrepreneurship, Functions of an Entrepreneur; Classification of entrepreneurs; Characteristic of successful entrepreneurs; Entrepreneurial opportunities; Success factors for entrepreneurs, entrepreneurial opportunities.

Unit-II Entrepreneurial growth in India:

sources of entrepreneurship in India; Entrepreneurial development programmes in India-concept , need and phases; Institutions conducting entrepreneurial development programmes in India; Problems in institutional framework; evaluating development programmes.

Unit-III Role of an entrepreneur in economic growth as an innovator:

Generation of employment opportunities; Complimenting and supplementing economic growth, bringing about social stability and balanced regional development of industries; Role in export promotion and Import Substitution; Forex earning and augmenting & meeting local demand.

Unit-IV Entrepreneurship process:

entrepreneurial mindset: concept and impact; Entrepreneurial growth strategies; Entrepreneurship/ corporate entrepreneurship: concept, need, Hurdles and benefits; Ideal and successful Intrapreneurship; Startup, Business Incubator, Acceleration,

Unit-V Business model: concept, types and functions:

BMC (Business Model Canvas), Innovation and Entrepreneurship: concept and challenges, Trends in entrepreneurship: Rural, Social and women entrepreneurship; Family businesses and entrepreneurship; entrepreneurship education ad research: need, obstacles, opportunities and developments.

Suggested Readings

- 1. David A.Kirby, “ Entrepreneurship “ Tata McGRaw Hills**
- 2. JasmersinghSain, Entrepreneurship and small Business” Deep and Deep publication**
- 3. Shankar Raj, “Entrepreneurship Theory and Practice” Vijay Nicole Imprints Pvt ltd.**
- 4. Khanka, S.S, “Entrepreneurship Development”, S. Chand & company**
- 5. Vasant Desai, “Fundamentals of Entrepreneurship “Himalaya Publishing House.,**
- 6. Dr.Punit Kumar Dwivedi, “Entrepreneurship and New Venture Creation”, Scientific International Publishing House (SIPH)**

Course Objectives: To provide an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making. To provide an understanding of the processes needed to develop, report, and analyse business data for business decision making using data driven models.

Unit1: Overview of Business Analytics:

- Business, Analytics as Solution for Business Challenges.
- Laying the foundation of Business Analytics: The science of data-driven decision making
- Concept of data, information, knowledge discovery, data quality issues, analytics, data mining, data analytics, applications of data analytics, business analytics and business intelligence
- Effective Predictive Analytics, Integrating Analytics in Business Processes, Unstructured Data Analytics, Balanced Scorecard, Dashboards, KPI based on Dashboard and Score card
- Why are Business Analytics important

Unit 2: Descriptive Analytics, Predictive Analytics and Prescriptive Analytics:

- Branches of Analytics – Introduction to Descriptive, Predictive and Prescriptive Analytics
- Introduction to Descriptive Analytics, Visualizing and Exploring Data, Descriptive Statistics,
- Introduction to Predictive Analytics, Predictive Modelling

Unit 3: Examining Data:

- Overview of statistical perspective – Understanding mean, median, mode, correlation analysis, normal distribution, standard deviation, variance, histogram, testing of normality, Kurtosis
- Data Quality, Master Data Management, Data Wrangling
- Handling Missing values, detection and handling of Outliers using Box- Whisker

method

- Data Exploration and Dimension Reduction using Principal Component Analysis (PCA).

Unit4: Data Modeling:

- Supervised and unsupervised learning, inferential and predictive statistics
- Data types, variables types,
- Data normalization and preparation,
- Partitioning of data into training, validation and test data sets
- Data driven modelling,
- Introduction to regression modeling,
- Model preparation using regression techniques,
- Data modelling using multiple linear regression (Simple linear regression model, Steps in model building, Splitting the Data set into Training and Validation, Fitting the model, Regression model summary, Residual analysis and Making predictions and measuring accuracy)
- Tree regression (CART) and Introduction to Logistic Regression
- Decision making using data driven models

Unit 5: Data Modeling using ANN:

- Data analytics using non-parametric
- Concepts and structure of an Artificial Neural Networks (ANN),
- Fitting in network to data and understanding various parameters of ANN.

Unit 6:Introduction to Latest Trends:

- Introduction to the latest trends in Data Analytics for business organizations
- Introduction to association rule, Discovering association rules in traditional Datasets
- Text mining
- Social network analysis.
- Case study, simulations, discussion and applications in various functional areas

Suggested Readings:

- 1. Business Analytics: The Science of Data Driven Decision Making, U Dinesh Kumar, Wiley Publication.**
2. Data Mining for Business Intelligence: Concepts, Techniques and Applications in Microsoft Office Excel with XLMiner, Peter C. Bruce GalitShmueli, Nitin R. Patel, Wiley Publication, 2016 (Reprint).
- 3. Fundamentals of Business Analytics by R N Prasad and SeemaAcharya, Wiley India Publication**
- 4. Win With Advanced Business Analytics by Jean Paul Isson and Jesse S. Harroitt, Wiley Publication, 2013**

Objective - Sales Management is a course designed to equip students with the knowledge and skills required to excel in sales and marketing roles within the pharmaceutical industry. The course focuses challenges and dynamics of the pharmaceutical sales environment. Course provides understanding of sales strategies, customer relationship management, and effective leadership.

Unit 1 - Introduction to the Pharmaceutical Industry

Overview of the pharmaceutical industry and its importance in healthcare. Key stakeholders and their roles.

Unit 2 - Pharmaceutical Sales Techniques

Selling skills and sales process in the pharmaceutical industry. Effective communication and presentation skills, relationship-building with healthcare professionals and stakeholders negotiation and objection handling in pharmaceutical sales

Unit 3 - Pharmaceutical Product Knowledge

Understanding pharmaceutical products, indications, and therapeutic areas. Understanding clinical data competitive product analysis and differentiation strategies. Handling product queries and addressing customer concerns

Unit 4 - Customer Relationship Management (CRM) in Pharma

Implementing and utilizing CRM systems in pharmaceutical sales. Customer databases and customer interactions. Customer targeting and sales strategies, building long-term customer relationships

Unit 5 - Sales Team Management and Leadership

Leadership styles and strategies for managing sales teams. Recruiting, training, and motivating sales representatives, Performance management .Coaching and mentoring for sales excellence.

Data for sales forecasting and performance tracking. KPIs for pharmaceutical sales Territory management and resource allocation.

Unit 6 - Key Account Management in Pharma

Key account management strategies for pharmaceutical sales. Building relationships with key stakeholders and key opinion leaders. Strategic account planning and execution and contract and tender management.

Unit 7- Emerging Trends in Pharma Sales

- Digital marketing and e-detailing in the pharmaceutical industry
- Multichannel engagement and remote selling
- Sales force automation and technology-enabled sales tools
- Patient-centric approaches and customer experience in pharmaceutical sales

Books:

"The Challenger Sale: Taking Control of the Customer Conversation" by Matthew Dixon and Brent Adamson

"The Science of Selling: Proven Strategies to Make Your Pitch, Influence Decisions, and Close the Deal" by David Hoffeld

"The Sales Bible: The Ultimate Sales Resource" by Jeffrey Gitomer

"The Sales Development Playbook: Build Repeatable Pipeline and Accelerate Growth with Inside Sales" by Trish Bertuzzi

"Sales Management. Simplified.: The Straight Truth About Getting Exceptional Results from Your Sales Team" by Mike Weinberg

"Selling the Invisible: A Field Guide to Modern Marketing" by Harry Beckwith

"To Sell Is Human: The Surprising Truth About Moving Others" by Daniel H. Pink

"Cracking the Sales Management Code: The Secrets to Measuring and Managing Sales Performance" by Jason Jordan and Michelle Vazzana

MPM 122Drug Regulatory Affairs & IPR Credits 4 (4-0-0)

Objectives of Course:

- To understand the important Acts and the regulatory regime related to the Pharmaceutical manufacturing
- To prepare student with knowledge and skills required for industry readiness
- To give an idea about IPR, registration and its enforcement

Unit I: The Drugs and Cosmetics act, 1940

The Drugs and Cosmetics act, 1940 and Rules with emphasis on Good laboratory practices and requirements of premises and equipment (Schedule L-I), Good manufacturing practices for pharmaceutical products (Schedule M), Requirements of factory premises for manufacture of cosmetics (Schedule M-II), ISI standards of cosmetics.

Unit II: Quality Validation

ICH Guidelines with specific reference to stability, analytical validation, impurities, pharmacopeias, specification, quality risk management and pharmaceutical development.

Unit III: Documentation:

Site master file, Standard operating procedure (SOP), Master formula record (MFR), Batch manufacturing record (BMR), Packaging records, specifications, Certificate of analysis (COA), Method of Analysis (MOA), Annual product review, validation protocols, Stability protocol, Material safety data sheet (MSDS), maintenance of records in Pharmaceutical industry.

Unit IV: Quality Management System:

Quality management systems: Quality management system requirement & Certifications: Concept and Principles of Quality managements, Total Quality Management, Quality by Design (QbD), QMS Model, Six Sigma concept, Out of Specifications (OOS), Change control, Introduction to ISO 9000 series of quality systems standards, Key Performance indicators, Internal audit Process, CAPA, Risk Analysis, Root cause analysis, Nonconformities.

Unit V: Dossier Preparation

Preparation of Common technical document(CTD), Modules of dossier, Table of Contents, DMF as per ICH guidelines, electronic documentation and e-filing (e-CTD).

Practical: Submission & Presentation of dossier

Unit VI: -Clinical trials:

Definition, Phase I, Phase II, Phase III and Phase IV studies, design documentation, presentation and interpretation, statistical analysis of clinical data, factorial design, guidelines as per Indian and other regulatory authorities.

Unit VII - Trademarks

Importance of trademark/brand name in Pharmaceutical Industries- Selection of healthy trademark, search of trademark, and process to get registration of trademark in India.

Unit VIII-Patents

Patent Registration- Basic requirements of the Patent in India, Check the Patentability, Type of Patent – Product / Process, Prior Art Search of trademark, Drafting of Patent-Provisional/ Complete Specification, Drafting of Claims of Patent, Process of Patent.

Important Case Law Study – Cadila Health Care Ltd V. Cadila Pharmaceuticals Ltd., Natco Vs. Bayer Case (2012), Novartis AG Vs. Union of India etc.

Suggested readings:

The Gazettes of India. The Drug and Cosmetics Act and Rules and its Latest amendments.

The Gazettes of India. The Patent Act 1970 and its Latest amendments.

Vijay Malik, Law relating to Drugs & Cosmetics.

Douglas J Pisano and David S. Mantus. Text book of FDA Regulatory Affairs a Guide for Prescription Drugs, Medical Devices, and Biologics' Second Edition.

www.fda.gov

www.patentoffice.nic.in

WHO GMP guidelines

www.ich.org

MPM 123 Elective I (Operations Management) Credits 4 (4-0-0)

Service Operations Management

Objective: This course Services Marketing Management aims to introduce learners to the enormity of prospects and challenges related to the marketing and managing of services with focus on pharmaceutical industry. The students of this course will benefit an exhaustive understanding of the features, conceptualization, design, strategy and delivery of services. They will also appreciate and realize the coordinated business effort through marketing, human resources and operations in delivering a top-quality service. Drawing examples from productive companies, this course will prepare students with frameworks and models that can be employed in a variety of contexts. The deliberations will orbit around the fundamental concepts of services marketing and best practices across industries and business models with special reference to pharmaceutical industry in India and Abroad.

Unit I: Fundamentals of Services Marketing

Introduction, Nature & Characteristics of Services, Services Marketing Mix (7Ps), Service Encounters, Consumer Behavior Strategic & Tactical Aspects of Services Marketing

Unit II: Service Product & Branding

What is a Service Product, Product Level Framework, Flower of Services, Branding Services, New Service Development

Unit III: Price & Promotion of Services

Pricing Challenges, Pricing Program, Revenue Management, Internal Marketing, Communication Strategy & Implementation, Advertising Services, Search, Experience, and Credence Properties, Customer Expectations of Service, Level of Expectations, Zone of Tolerance

Unit IV: Place & Process Decisions

Methods of Service Delivery, Role of Intermediaries, Franchising, Service Process, Developing a Service Blueprint, Self Service Technologies (SSTs), Application of Service Blueprint, Managing Capacity & Demand

Unit V: People & Physical Evidence

Frontline Service Employees, People Management Strategies, Service Environment, Servicescape Model, Designing Servicescapes

Unit VI: Service Excellence

Enabling Service Excellence, Delivering Value, Service Failure & Recovery, Service Quality, Assessing gaps in service quality, Customer Loyalty, Managing Relationships and Building Loyalty, Customer Lifetime Value

Suggested Reference books:

Zeithaml	Valarie A.	Service Marketing
Wirlz	Jochen	Service Marketing
Rao	K.RamaMohana	Service Marketing

MPM 123 Elective I (Marketing Management) Credits 4 (4-0-0)

Services & Relationship Marketing

Objective: To acquaint the students with concepts and techniques in the management of services marketing and help them learn the issues in managing unconventional challenges in service marketing.

Unit I Introduction

Difference between product and services marketing; Characteristics of services; Classification of services; Paradigms in services marketing. Service marketing system: Service quality; Understanding customer expectations and zone of tolerance; Segmentation and zone of tolerance; Targeting and positioning of service. Role of Services in Economy.

Unit II Services marketing mix

Augmented marketing mix; Developing the service product/intangible product; Service product planning; Service pricing strategy; Services promotions; Services distributions. Physical evidence: Role of communication in service marketing; People and internal communication; Process of operations and delivery of services; Role of technology in services marketing.

Unit III Service Quality

Quality Issues and Quality Models (Gaps model, SERVQUAL); Demand-supply Management. Services failure, service recovery, Customer retention, Customer Relationship management, designing of service strategy.

Unit IV Marketing of Services in Practice

Tourism Services Marketing, Marketing of Transportation & Logistics Management, Marketing of Financial Services, Marketing of Communication Services, Media & Advertising Service Marketing, Marketing of Healthcare Services, Marketing of Consultancy Services, Marketing of Retail Services. Marketing of Educational Services, Marketing of Public Services.

Unit V Services in global perspective

International marketing of services; recent trends; Principal driving force in global marketing of services; Key decisions in global marketing; Services strategy and organizing for global marketing.

Unit VI Relationship Marketing

Promotion: Promotion Mix-Advertising, Sales Promotion, Personal selling; and Public Relations: Direct Marketing & Relationship Marketing; Placement: Channels of distribution: Levels and types of channels, functions and management of channel members; Channel Selection & Motivation; Management of Physical Distribution; Current trends in wholesaling and retailing; Marketing Organisation and Control.

Suggested readings

- 1) Baron S and Harris K- Services Marketing: Text and Cases (Palgrave, 2003)
- 2) Lovelock- Services Marketing: People, Technology and Strategy (Pearson Education, 5th edition).
- 3) Zeithaml, V. A and Bitner, M. J. - Services Marketing (Tata McGraw-Hill).
- 4) S. L. Gupta Marketing of Services (Sultan Chand).
- 5) Rama Mohana Rao Services Marketing (Pearson Education).
- 6) Govind Apte- Services Marketing (Oxford Univ. Press).
- 7) P. Srinivasan- Services Marketing. PHI.
- 8) Bhattacharjee- Services Marketing, Excel Books.
- 9) Nargundkar – Service marketing , TMH.
- 10) Nimit & Monika Chowdhary- Text book of Marketing of Services: The Indian Experience, MacMillan India Limited