



**MANAV RACHNA
UNIVERSITY** 
FORMERLY MANAV RACHNA COLLEGE OF ENGINEERING
NAAC ACCREDITED A GRADE INSTITUTION

Declared as State Private University under section 2f of the UGC act, 1956

**MANAV RACHNA UNIVERSITY
DEPARTMENT OF MANAGEMENT AND COMMERCE
SYLLABUS- BBA-OPERATIONS MANAGEMENT (OM)
2019-2022**

**DEPARTMENT OF MANAGEMENT AND COMMERCE
SYLLABUS- BBA-OPERATIONS MANAGEMENT (OM)**

2019-2022

SEMESTER - 1										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/ Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH101B	FUNDAMENTALS OF MANAGEMENT	DMC	HARD	CORE	3	0	0	0	3	3
MCH102B	MICRO ECONOMICS	DMC	HARD	CORE	3	0	0	0	3	3
MCH103B	ACCOUNTING FOR MANAGERS	DMC	HARD	CORE	3	0	0	0	3	3
MCH104B	ORGANIZATIONAL BEHAVIOUR	DMC	HARD	CORE	3	0	0	0	3	3
MCH105B	MARKETING MANAGEMENT	DMC	HARD	CORE	3	0	0	0	3	3
MCH106B	BUSINESS STATISTICS	DMC	HARD	CORE	3	0	0	0	3	3
ECH104B	COMPUTERS AND INFORMATION SYSTEM LAB	ECE	HARD	CORE	2	0	2	0	4	3
MCH107B	BUSINESS COMMUNICATION – I	DMC	SOFT	CORE	3	0	0	0	3	3
MCH111	PRINCIPLES OF	ME	HARD	ELEC	3	0	0	0	3	3

B	MANUFACTURING		RD	TIVE							
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						26	0	2	0	28	27

SEMESTER I

Course Title/Code	FUNDAMENTALS OF MANAGEMENT / MCH 101B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The course aims to help the student to acquire current and relevant management knowledge and understanding of managerial functions and principles in achieving organizational success.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Concept and Nature of Management:- Concept of Organization, Meaning and Definition of Management; Nature and Importance of Management, Management as Science, Art and Profession, Functions & Process of Management, Management and Administration, levels of management, Skills and roles of a manager, Social Responsibilities and Ethics.

SECTION B

Development of Management Thought- Schools of Management Thought- F.W. Taylor's Scientific Management, Henry Fayol's Organizational Theory, Max Weber's Bureaucracy; Elton Mayo's Human Relations Approach , System Approach and Contingency Approach.

SECTION C

Planning Organizing and Decision Making;- Concept, Nature and Elements of Planning, Types of Plans, Levels of Planning, Steps in Planning, Decision Making and Process of Rational Decision Making, Organizing-Nature Process and Importance, Forms of Organizational Structure, Span of Management, Departmentation, Delegation and Decentralization of Authority.

SECTION D

Leading & Control:- Meaning and Significance of Leadership, Leadership Styles, Essentials of Successful Leadership, Communication- Importance, Process and Barriers to Communications and Overcoming these Barriers, Principles of Effective Communication. Motivation- Definition, Motives and Motivation, Theories of Motivation. Controlling- Definition and Elements of Control Process, Types of Control System; Pre-Requisites of Effective Control System, An Overview of Budgetary And Non-Budgetary Control Devices.

References

1. Essentials of Management – Harold, Koontz and Cyril O' Donnell Heinz WeihrichKoontz . 9thed, (Mc.Graw Hill Publishers)., 2006
2. Fundamentals of Management, Essential Concepts and Applications, Robbins &DeCenzo, 9thed, Pearson, 2000
3. Vasisht, Neeru, Principles of Management, Taxmann, New Delhi.
4. L.M. Prasad , Principles & Practices of Management, Sultan Chand & Sons), 2015

Course Title/Code	MICRO ECONOMICS/ MCH 102B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	NIL
Course Objectives	The objective of this course is to familiarize the students with concepts and techniques used in Micro-Economic theory and to develop their capability to apply these concepts and techniques in making decisions pertaining to different business situations.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Microeconomics: meaning nature and scope. Basic concepts of economics: Static and dynamic approaches, equilibrium, utility, opportunity cost, marginal and incremental principles. Microeconomics and Business, Utility analysis.

SECTION B

Theory of demand: Nature of demand for a product, individual demand, market demand, determinants of demand. Elasticity of demand and its determinants, demand as multivariate function.

SECTION C

Theory of production and costs: The concept of production function, production with one and two variable inputs, optimal input combination, theory of cost in short run and long run, revenue function.

SECTION D

Theory of firm and market organization: Breakeven analysis, pricing under perfect competition, pricing under monopoly, price discrimination, pricing under monopolistic competition, selling cost, pricing under oligopoly: cournot model, kinked demand curve and price leadership.

References:

1. D N Dwivdi, Micro Economics: Theory and Applications, 1sted, Sultan Chand & Co., New Delhi, 2018
2. N Gregory Mankiw, Principles of Micro Economics, 6thed, Cengage India, 2006
3. Salvatore, Dominick, Principles of Microeconomics, 5thed, Oxford University Press, 2009
4. Samuelson, Micro-Economics;19thed, McGraw-Hill International Edition, 2010

Course Title/Code	ACCOUNTING FOR MANAGERS / MCH 103B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Pre-requisites	None
Course Objectives	The primary objective of the course is to familiarize the professional undergraduate students with the basic accounting principles and techniques of preparing and presenting the accounts for user of accounting information.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction: Financial Accounting-definition and Scope, objectives of Financial Accounting, Accounting v/s Book Keeping Terms used in accounting, users of accounting information and limitations of Financial Accounting. Conceptual Frame work: Accounting Concepts, Principles and Conventions, Accounting Standards-concept, objectives, benefits, brief review of Accounting Standards in India.

SECTION B

Recording of transactions: Voucher system; Accounting Process, Journals, Subsidiary Books, Ledger, Cash Book, Bank Reconciliation Statement, Trial Balance, Depreciation: Meaning, need & importance of depreciation, methods of charging depreciation.(WDV & SLM)

SECTION C

Cost Accounting - Elements of Cost, Types of Costs, Preparation of Cost Sheet, Standard Costing: Variance Analysis – Material Variances – Labor Variances – Simple Problems Related to Material and Labor Variances only.

SECTION D

Management Accounting: Ratio Analysis: Uses and Limitations, Classification of Ratios – Liquidity, Profitability, Financial and Turnover Ratios, Simple Problems Only. Cash Flow Analysis: Uses and Limitations. Budgets: cash budget, purchase budget, sales budget, fixed and flexible budget. Break-Even Analysis - Cost Volume Profit

References:

1. R.L. Gupta – Advanced Accounting, 13th ed, Sultan Chand and Sons, 2018
2. Shah: Basic Financial Accounting, 4th ed, Oxford University Press. 2017
3. Maheshwari and Maheshwari – An Introduction to Accountancy 12ed – Vikas Publishing House, 2018
4. Bhattacharya/financial Accounting for business Managers, 3rd ed, Prentice Hall of India, 2006.
5. Khan and Jain, Financial Accounting, 5th ed, Tata McGraw-Hill Education,2007

Course Title/Code	BUSINESS STATISTICS / MCH 106B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Learning important statistical techniques required for performing data analysis and its interpretation, as it further assists in managerial decision-making..

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction: Meaning and definitions of Statistical Data; Applications of Statistics in Managerial Decision-Making; Frequency Distributions. Measures of Central Tendency: Mean, Geometric mean, Harmonic mean, Median, Mode and their implications. Partition Values: Quartiles, Deciles and Percentiles. Measures of Dispersion: Range, Quartile Deviation, Mean Deviation and Standard Deviation.

SECTION B

Probability: Concept, Uses of Probability in Business Decision-Making, Addition and Multiplication Theorem of Probability.

SECTION C

Correlation, Karl Pearson Correlation Coefficient, Scatter Diagram, Regression Analysis, Regression Equation, Skewness and Kurtosis.

SECTION D

Meaning, Importance and Component of Time Series, Additive Model, Multiplication Model, Measurement of Trend: Semi Average Method, Moving Average Method and Methods of Least Squares.

References:

1. Levin, Richard, David S. Rubin, Rastogi, and Siddiqui. Statistics for Management, 10th ed., Pearson Education, 2016.
2. Siegel Andrew F. Practical Business Statistics, 6th ed, McGraw Hill, 2012.
3. Quantitative Techniques For Managerial Decision Making: Srivastava, Shenoy, Sharma, New Age Pub.
4. Statistical Methods: S P Gupta, Sultan Chand Publication.
5. Vohra N. D., Business Statistics, McGraw Hill.

Course Title/Code	ORGANIZATIONAL BEHAVIOUR/MCH 104B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	NIL
Course Objectives	The course aims to provide an understanding of the basic concepts, theories and techniques in the field of human behaviour at the individual, group and organizational levels

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Organizational Behaviour: - Meaning and Importance of Organizational Behaviour, Need for Organizational Behavior, Role of Managers in OB- Interpersonal Roles-Informational Roles- Decisional Roles, Challenges and Opportunities for OB, Models of OB.

SECTION B

Foundation of individual behavior- Perception – nature, importance, perceptual selectivity, stereotyping, halo effect, Learning and its theories, behavior modification, Attitudes: importance, components and major job attitude. Personality- meaning, self-concept, self-esteem, major determinants of personality, Motivation- types of motivation, theories of work motivation given

by Maslow, Herzberg, McGregor, Vroom and Porter – Lawler. Nature and meaning of Interpersonal Behavior, and Transactional Analysis; Benefits and uses of Transactional Analysis, Johari Window Model

SECTION C

Group Behavior & Team development

Group dynamics, Types of groups, Group norms and roles, Group cohesiveness, Group development and facilitation, Understanding work Teams and types of team, Creating effective team. Dynamics of managerial leadership: nature, leadership styles, trait, behavioral, contingency theories, and managerial grid.

SECTION D

Organizational Culture-Concept, Functions, Socialization; Creating and sustaining culture; Managing Conflict – Sources, types, process and resolution of conflict; Managing Change; Managing across Cultures; Empowerment and Participation..

References:

1. Robins, Stephen P. - Organizational Behavior, 16thed, Pearson Education Asia, 2016
2. Peter Schen , Organizational Psychology and Leadership, 5thed, John Wiley and Sons, 2017
3. Parikh, Gupta, Organizational Behavior, 1sted, Tata McGraw Hill, 2010
4. Fred Luthans, Organization Behavior, 12thed, Tata McGraw Hill, 2010
5. Newstrom, Organizational Behaviour: Human Behaviour at Work, 12thed, Tata McGraw Hill, 2017.

Course Title/Code	MARKETING MANAGEMENT /MCH105B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The objective of this paper is to identify and develop knowledge and skills in application of the fundamental terms and concepts that are commonly used in marketing. The course aims to develop competence in market analysis, and decision making relevant to marketing management required for effective marketing practice. This course attempts to develop relationship between marketing and other management functions

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

An Overview: Introduction, Definition of Market, Types of Markets, Meaning and Definition of Marketing, Origin of Marketing, Scope of Marketing, Importance of Marketing, Functions of Marketing, Difference between Marketing and Selling; Marketing Concepts: Introduction, Exchange concept, Production concept, Product concept, Sales/selling concept, Modern marketing concept, Societal marketing concept, Impact of marketing concepts and its applicability; Marketing Environment: Introduction, Need and Importance of Environmental Analysis, Methods of Analysis – SWOT, PEST, Internal Environment of the Organization,

External Environment; Consumer Behaviour: Introduction, Important definitions, Evolution of the study of consumer behavior, Determinants of consumer behavior, Types of buying decisions, Stages of the buying process, Importance of consumer behaviour study

SECTION B

Marketing Planning and Strategies: Introduction, Management Processes in Marketing, Types of Marketing Plan, Competitive Marketing Strategies, Interactions between Marketing Mix and Marketing Environment , Control Mechanisms in Marketing;Market Segmentation: Introduction, Definition of market segmentation, Need for market segmentation, Criteria for effective segmentation, Bases for market segmentation, Benefits of market segmentation; Product Related Decisions: Introduction, Features of a Product and its Classifications, Product Plan and New Product Development, Product Mix and its Elements, Decisions related to Product Mix, Product Life Cycle

SECTION C

Introduction to branding: introduction, definition of a brand, development of a brand, types of brands, importance of brands and branding, merits and demerits of branding, brand equity – definition and benefits;. Pricing decisions: introduction, price and its determinants, objectives of pricing decisions, factors affecting pricing decisions, pricing policies and strategies, pricing methods; distribution strategy: introduction, meaning, need for and importance of distribution channel, factors influencing channel decisions, types of channels, direct channel, indirect channel, functions of channel members

SECTION D

Promotion Mix: Introduction, Promotion mix and its components, Advertising, Sales Promotion,Personal selling, Direct marketing, Public Relations and publicity, Online marketing,

Developing an integrated promotion mix;. Promotion Mix Decisions: Introduction: Advertising decisions, Sales promotion decisions, Personal selling decisions, Public Relations and Publicity decisions; Services Marketing: Introduction, Definition of services, Characteristics of services , Distinction between goods and services, Marketing mix for services, Types of services, Strategies for Services Marketing; Recent Trends in Marketing : Introduction, E-commerce, E-marketing, E-Retailing, Relationship marketing, Mobile marketing, Green marketing

References:

1. Philip Kotler and Kevin Lane Keller Marketing Management, Global Edition , 15 ed, Person, 2015
2. Michael J. Etzel Bruce J. Walker William J. Stanton ,Ajay Pandit,Marketing, 14thed, McGraw Hill Education, 2010
3. Lamb, W., Hair, J., McDaniel, C. (1998), Marketing, (4th edn), South-Western College Publishing, Cincinnati.
4. Gary Armstrong and Philip Kotler, Marketing: An Introduction, Pearson, 2017.
5. Kumar, Ramesh; "Application Exercises in Management,"Vikas Publishing House, 2004.

Course Title/Code	COMPUTERS AND INFORMATION SYSTEMS/ECH104B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	2-0-2-0
Course Objectives	This is a basic paper for Business Administration students to familiarize with the computer and it's applications in the relevant fields and exposes them to other related papers of IT.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Evolution of Computer, Data, Instruction and Information, Characteristics of computers, Various fields of application of computers, Various fields of computer (Hardware, Software, Human ware and Firmware), Advantages and Limitations of computer, Block diagram of computer, Function of different units of computer, Classification of computers i) On the basis of Input (Digital, Analog and Hybrid) ii) On the basis of processing speed and storage capacity (Micro, Mini, Mainframe and Super), Different Generation of computers (I to V), Types of software (System and Application), Compiler and Interpreter, Generation of language (Machine Level, Assembly, High Level, 4GL)

SECTION B

Different Number System (Decimal, Binary, Octal and hexadecimal) and their interconversion (Fixed Point Only), Binary Arithmetic (Addition, Subtraction, Multiplication and Division); Keyboard, Mouse, Joystick, Digitizer, Scanner, MICR, OCR, OMR, Light Pen, Touch Screen, Bar Code Reader, Voice Input Device, Monitor and it's type (VGA, SVGA and XGA), Printer and it's type (Impact and Non-Impact with example), Plotter

SECTION C

Primary Memory (ROM and it's type – PROM, EPROM, EEPROM, RAM) Secondary memory- SASD, DASD Concept, Magnetic Disks – Floppy disks, Hard disks, Magnetic Tape, Optical disks – CD ROM and it's type (CD ROM, CD ROM-R, CD ROM-EO, DVD ROM.); Introduction to operating system; Function of OS, Types of operating systems, Booting Procedure, Start-up sequence, Details of basic system configuration, Important terms like Directory, File, Volume, Label, Drive name, etc

SECTION D

Networking Concepts, Types of networking (LAN, MAN AND WAN), Communication Media, Mode of Transmission (Simplex, Half Duplex, Full Duplex), Synchronous and Asynchronous Transmission, Different Topologies; Introduction to Information System: system concepts- feedback and control, other system characteristics, components of an information system. . Overview of information systems, the expanding roles of information system, Systems-trends in information systems, types of information system.

COMPUTERS & INFORMATION SYSTEMS LAB

MS-DOS & MS-WINDOWS

Configuration of System in MS-DOS and MS-WINDOWS.;Environment Specifically – Role and Functions of Key files such as Batch files, SYS files etc. File creation, Edit and Directory Creation of MS-DOS.;Environment and Write, Paint Brush, File Manager, Print Manager, Control Panel etc. for Windows environment.

Working with MS- Office: MS-WORD: Word Basics, Commands, Formatting, Text and Documents, Sorting, Mail Merge etc.;MS-EXCEL: Basic, Formatting, Functions, Creating Charts, Working with Graphics, Using worksheet as Databases.; MS-POWER POINT: PowerPoint Basics, Creating Presentations, Slide show, working with Graphics

References:

- 1 V.Rajaraman , Fundamentals of Computers-, 6h ed, Prentice Hall of India, 2014
- 2 P.K. Sinha, Fundamentals of Computers, 6thed, 2014
- 3 Suresh K. Basabdra , Computer Today, BpB Publications., New Delhi, 2005
- 4 Deepak Barihoke, Essential of IT, Bpb Publications, 2003

Course Title/Code	BUSINESS COMMUNICATION SKILLS I/ MCH107B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Pre-requisites	Knowledge of Communication Skills and enable the students to work effectively in business environment.
Course Objectives	<p>CO1:To develop the skills of the professional undergraduate students for proper self-expression, social communication, spoken English, correct pronunciation, voice modulation and business etiquettes.</p> <p>CO2: The students will improve their personality, communication skills and enhance their self-confidence.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Parts of Speech, Sentence

Introduction to Business Communication: Basic forms of communication, Process of communication, Principles of effective Business Communication, 7 Cs.

Media of Communication: Types of communication: Barriers of communication; Technology Enabled Communication; E-mail etiquettes and writing.

SECTION B

Tenses, Active and Passive Voice

Introduction to Business Communication: Communication models and processes; Theories of Communication.

Self-Development and Communication: Development of positive personal attitudes.

Report Writing

SECTION C

Words often confused, Homophones and Homonyms

Corporate Communication: Formal and Informal communication networks; Grapevine; Miscommunication; Steps for improving communication.

Business manners. Body language gestures, Etiquette of the written word, Etiquette of the telephone handling, business meetings.

Business letter writing: Need, Functions and Kinds. Layout of letter writing. Types of letter writing: Persuasive letters, Request letters, Sales letters, Complaints and Adjustments.

SECTION D

Identifying & Analyzing Grammatical Errors in sentences related to Pronoun, Article, Verb, Preposition, Jumbled Sentences

Group Discussions: Principles and steps; Interviews/Mock interviews; Hearing vs Listening, Principles of Effective Listening; Individual and group presentations.

Departmental Communication: Meaning, Need and types: Interview letters, Promotion Letters, Resignation letters, Newsletters, Circulars, Agenda, Notice, Memorandums, Office orders.

Suggested Readings:

1. Chhabra T N; Business Communication: Concepts and Skills, Sun India Publications. New Delhi, 2016.
2. Convey, R. Stephen; The Seven Habits of Highly Effective People. Paperback – Special Edition, 19 Nov 2013
3. E.H.McGrath, S.J.; Basic Managerial Skills for All, 4th ed., Prentice Hall of India Pvt. Ltd., New Delhi, 2001.
4. Krizan AC, Merrier Patricia, Logan Joyce, Williams Karen; Effective Business Communication, 7th ed. Cengage learning.2010.
5. Kumar Sanjay, PushpaLata; Communication Skills; Oxford University Press.2nd ed. 2011.
6. Magan Sangeeta; Business Communication: 2nd ed., International Book House Pvt. Ltd.2013
7. Mukhrjee Hory Shankar; Business Communication, Connecting at Work, Oxford University Press.2012.
8. Penrose, Rasberry, Myers; Business Communication for Managers: An Advanced Approach; 5th India ed.; Thompson Learning, South-Western. 2005.
9. Penrose Rasberry, Myres; Advanced Business Communication, 4th ed.,South West College Publishers, 2001.
10. Ray, Reuben; Communication Today – Understanding Creative Skills, Himalaya Publishing House, 2001.
11. Robinson, David; Business Etiquette,2nd ed., Paperback, 2012.
12. Rogets Thesaurus of English Words and Phrases, Penguin Reference; by George Davidson (Editor), Paperback 2004.
13. Sinha, K. K.; Business Communication, Galgotia Publishers, 2nd ed. 2003.

14. Williams Karen, “Buddy” Krizan AC, Logan Joyce, Merrier Patricia; Communicating in Business 8th ed., Cengage learning.2010.
15. Wren & Martin; New Ed. ; High School; English Grammar & Composition Revised by N.D.V. Prasada Rao; S. Chand.

Course Title/Code	PRINCIPLES OF MANUFACTURING / MCH 111B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The course aims to help the student to acquire current and relevant management knowledge and understanding of principles of manufacturing.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Overview of Manufacturing: Define manufacturing and describe how it is used to solve problems. Research the five general steps of manufacturing (preparation, processing, assembly, finishing, and packaging). Research the history of manufacturing. Summarize its evolution from the Industrial Age to the rise of mechanization and automation in the manufacturing industry

SECTION B

Quality Assurance and Continuous Improvement: research the three basic types of data that are important to controlling the manufacturing of a product: product output data, quality control data, and labor data. Examine common statistical processes to analyze data. As a class, develop standard procedures for analysis to apply to manufacturing projects throughout the course and program of study.

SECTION C

Unit Process Variation and Control: Modeling and controlling temporal and spatial variation in unit processes, Factory Level System Variation and Control: Modeling and controlling flows in manufacturing systems with stochastic elements and inputs; Supply Chain – System Variation and Control: How to operate and design optimal manufacturing-centered supply chains

SECTION D

Latest Trends in Advanced Manufacturing: Explore a range of new and emerging trends in advanced manufacturing. A trend could be the change in the types of skills needed in manufacturing, the use of computers, or the use of advanced materials in recent years. Examples include the following: a. Process control b. Materials design, synthesis, and processing c. Digital manufacturing technologies d. Sustainable manufacturing e. Flexible electronics manufacturing and f. Additive manufacturing. Research one or more of these trends in depth, and compile, review, and revise a presentation or a paper explaining both the technical aspects involved and the effects on businesses, workers, and society.; Business Flows: Understanding the uses and flow of business information to start up, scale up and operate a manufacturing facility.

References :

1. Peter Fehrenbach ,The 12 Principles of Manufacturing Excellence: A Leader's Guide to Achieving and Sustaining Excellence Larry E. Fast Productivity Press
2. The Toyota Way to Lean Leadership: Achieving and Sustaining Excellence through Leadership Development, Jeffrey Liker, Gary Convis McGraw-Hill
3. Supply Chain Transformation: Building and Executing an Integrated Supply Chain Strategy, J. Paul Dittmann, McGraw-Hill
4. Principles of Modern Manufacturing 4/e SI Version, M P Groover, John Wiley & Sons, Inc.

SEMESTER - 2

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective/University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH112 B	BUSINESS ENVIRONMENT	DM C	HA RD	CORE	3	0	0	0	3	3
MCH113 B	MACRO ECONOMICS	DM C	HA RD	CORE	3	0	0	0	3	3
MCH114 B	HUMAN RESOURCE MANAGEMENT	DM C	HA RD	CORE	3	0	0	0	3	3
MCH115 B	FINANCIAL MANAGEMENT	DM C	HA RD	CORE	3	0	0	0	3	3
CHH105 B	ADVANCED EXCEL	CST	HA RD	CORE	2	0	2	0	4	3
MCH116 B	BUSINESS COMMUNICATION SKILLS- II	DM C	SOF T	CORE	3	0	0	0	3	3
MCH117 B	FUNDAMENTALS OF LOGISTICS	DM C	HA RD	ELEC TIVE	3	0	0	0	3	3
CDO101 B	PROFESSIONAL DEVELOPMENT PROGRAMME II	CD C	SOF T	UC	2	0	0	0	2	0
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					22	0	2	0	24	21
	POST II SEM									
MCH121 B	SUMMER TRAINING (TO BE EVALUATED IN III SEM)	DM C	NTC C	ELEC TIVE	0	0	0	2	0	2

Course Title/Code	BUSINESS ENVIRONMENT /MCH 112B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	<p>CO1: This course will provide a comprehensive introduction to the subject of Business research, and discuss some key concepts, process and techniques, and their applications.</p> <p>CO2: After completion of this course, students will gain an appreciation for some of the breadth and depth of this subject and its significance for a business enterprise.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Basic Concepts of Research: Business research; its concept, nature, scope, need and managerial value of business research; Research: Its objectives and types. Definitions: concepts, constructs, variables, Formulation of Research Problem; Steps of research & Research ethics. Research Design: Types of Research Design; Factors Affecting Research Design. Literature Review.

SECTION B

Sampling Methods and Techniques: Basic Concepts, Characteristics of a good sample, Sampling Frame, Sampling errors, Non Sampling errors, Types of sampling: Probability Sample, Non

Probability sampling. Measurement of Data: Concept of Measurement: what is measured, Problems in measurement in management research - Validity and Reliability. Levels of measurement - Nominal, Ordinal, Interval, Ratio scales. Attitude Scaling Techniques: Rating Scales and Ranking Scales – Paired Comparison & Forced Ranking - Concept and Application. Types of Data - Primary Data, secondary data; data Collection - Questionnaire Method: Questionnaire Construction - Personal Interviews, Telephonic survey interviewing, and observational methods; editing, coding, content analysis

SECTION C

Hypothesis Formulation: An overview of non-parametric tests (Wilcoxon Matched – pairs signed – rank test, Mann – Whitney test, Kruskal – Wallis H-test), Introduction to Multivariate Analysis: Factor Analysis; Discriminant Analysis; Cluster Analysis; Dimensional Analysis; Conjoint Analysis.

SECTION D

Presentation of Results: Report writing: Purpose of a Report; Essentials of a Good Report; Format of a Report; Types of Report Presentation, procedure of preparation of reference and bibliography (APA model)

References:

1. WG Zikmund, BJ Babin, JC Carr, M Griffin., Business Research Methods, 8thed, Thomson Learning, Bombay House, 2013.
2. T N Srivastava, ShailajaRego, Business Research Methods, 2nded, Tata McGraw- Hill Companies, 2008
3. Naresh K. Malhotra, David F. Birks, Daniel Nunan, Marketing Research: An Applied Approach, 5thed, Pearson Education, New Delhi, 2017.
4. Deepak Chawla, Neena Sondhi, Research Methodology, Vikas Publications, 2011
Pralhad Mishra, Business Research Methods: 1sted, Oxford India, 2015

Course Title/Code	MACRO ECONOMICS/MCH113B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The Macroeconomics course is designed to provide students with a unified frame work that can be used to analyze macroeconomic issues such as national income concepts, Money Supply, Inflation, National Income determination, International aspects of Macroeconomics and macroeconomic policies.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Macroeconomics: meaning, nature and scope, the circular flow Models of the Economy, National Income: Concepts, measurements, difficulties and importance.

SECTION B

Money – Its functions and Role, Quantity theory of Money, Keynesian view about money and price; Inflation – Meaning, Measures and Effects; Theories of Inflation

SECTION C

Theory of Income and Employment – The classical theory of Output and Employment,
Keynesian Theory of Income and Employment, Four sector model of income determination in an
open Economy

SECTION D

Balance of Payments: Meaning and Assessment, Disequilibrium and Adjustments,
Macroeconomic Policy: Meaning, Objectives and Formulation, Monetary Policy and Fiscal
Policy

References:

- 1 Errol D'Souza, Macro Economics, 2/e, Pearson Education, 2012.
- 2 Aggarwal, Macroeconomics Theory and Policy, Pearson Education.1,e, paperback, 2010
- 3 Samuelson, Nordhaus, Chaudhri, Macroeconomics, Tata McGraw Hill, 19/e, 19th
edition, 2010
- 4 D. N Dwivedi, Macro Economics, McGraw Hill Education, 4th edition, 2015
- 5 Mishra and Puri, Modern Macro-Economic Theory, Himalaya Publishing House. 17th ed,
2017

Course Title/Code	HUMAN RESOURCE MANAGEMENT /MCH114B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The objective of the course is to familiarize students with the different aspects of managing Human Resources in the organization through the phases of acquisition, development and retention.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction: Concept, nature, scope, objectives and importance of HRM; Evolution of HRM; Environment of HRM; Personnel Management v/s HRM. Acquisition of Human Resources: HR Planning; Job analysis – job description and job specification; recruitment – sources and process; selection process – tests and interviews; placement and induction. Job changes – transfers, promotions/demotions, separations

SECTION B

Training and Development: Concept and importance of training; types of training; methods of training; design of training program; evaluation of training effectiveness; executive development – process and techniques; career planning and development

SECTION C

Performance Appraisal: Performance appraisal – concept and objectives; traditional and modern methods, limitations of performance appraisal methods.

SECTION D

Compensation and Maintenance: Compensation: job evaluation – concept, process and significance; components of employee remuneration – base and supplementary; maintenance: overview of employee welfare, health and safety, social security.

References:

1. Chhabra, T. N; Human Resource Management, 4thed, Dhanpati Rai and Co. Pvt. Ltd New Delhi 2003.
2. Dr. Gupta, C. B.; Human Resource Management, 11th revised ed, Sultan Chand and Sons, New Delhi, 2008.
3. Khanka S S, Human Resource Management (Text and Cases), S. Chand & Company Ltd, 2013
4. Flippo, Edwin B. ,Personnel Management, (McGraw-Hill International Editions: Management Series, 1984.
5. Rao, V S P, Human Resource Management, Text and Cases, Excel Books, 2004.
6. Aswathappa, K.; Human Resource and Personnel Management (Text and Cases), Tata McGraw Hill Publishing Company, New Delhi, 2003
7. Dessler, Gary. Human Resource Management, 15th ed, Prentice Hall, 2013
8. D'Enzo,David A & Stephen P.Robbin, Personnel Human Resource Management, 7thed, Prentice Hall of India.

Course Title/Code	FINANCIAL MANAGEMENT/MCH115B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Finance is the backbone of an organization and efficient management of finance is directly related to the efficient management of enterprise. The objective of this course is to acquaint the students with the overall framework of financial decision-making in a business unit.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction, Objectives of Financial Management, Scope and Functions of Financial Managers, Financial Managers roles, Profit Vs Wealth Maximization, Agency Costs, Time Value of Money, Future Value and Present Value of lump sum, Future Value and Present Value of Annuity, Multi Period compounding

SECTION B

Capital Budgeting Decisions, Nature of Investment Decisions, Investment Evaluation Criteria: NPV (Net Present Value), IRR (Internal Rate of Return), PI (Profitability Index), Payback Period, Discounted Payback Period, Accounting Rate of Return

SECTION C

Significance of Working Capital Management, Types of Working Capital, Operating Cycle, Determinants of working capital, Objectives of Inventory Management, Types of Inventory, Economic Order Quantity, Cash Management, Motives for Holding Cash, Objectives of Cash Management , Credit Management, Credit Management

SECTION D

Meaning, Factors Affecting Cost of Capital, Significance, Capital Structure Theories: Concept of Value of Firm, Factors Determining Capital Structure, Financial Distress, Leverages: Meaning, Financial Leverage and Operational Leverage, Significance, Dividend Policy: Definition and Types of Dividends, Determinants of Dividend Policy, Rights and Bonus Shares

Text Books:

1. I. M. Pandey, Financial Management 2010 (10thed.) (Vikas Publishing House)
2. Y. M. Khan, and P. K. Jain, Financial Management 2012 (6thed.) (Tata McGraw Hill Company)

Reference Books:

1. Prasanna Chandra, Financial Management: Theory and Practice,2012 (8th ed.) (Tata McGraw Hill)
2. Van C. Horne & M. Wachowich, Fundamentals of Financial Management 2008 (13thed.) (Prentice Hall of India).

Course Title/Code	ADVANCED EXCEL/ CHH105B
Course Type:	Core
Course Nature:	Hard
L-T-P-OStructure	2-0-2-0
Course Objectives	At the end of this course, students will be able to understand the basic and advanced functions in Excel for business activities.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Excel: Excel Introduction, Understanding Workbooks and Worksheets, Introducing the Ribbon, Using Shortcut Menus, Working with Dialog Boxes, Using the Task Pane, Creating Excel Worksheet, Entering and Editing Worksheet Data, Essential Worksheet Operations.

SECTION B

Advanced Excel : Working with Cells and Ranges, Introducing Tables, Worksheet Formatting, Using Custom Number Formats, Understanding Excel Files, Using and Creating Templates, Printing Your Work, Working with Dates and Times, Introducing Formulas and Functions, Creating Formulas That Count and Sum, Creating Formulas That Look Up Values

SECTION C

Creating Formulas for Financial Applications, Introducing Array Formulas, Visualizing Data Using Conditional Formatting, Using Data Validation, Creating Charts and Graphics 04 Understanding How Excel Handles Charts, Understanding Chart Types, Understanding Chart Elements, Modifying the Chart Area, Modifying the Plot Area, Working with Chart Titles, Working with a Legend

SECTION D

Working with Gridlines, Working with Data Series, Creating Chart Templates, Analyzing Data with Excel 04 Introducing Pivot Tables, Analyzing Data with Pivot Tables, Understanding Slicers and Slicer properties

References:

1. John Walkenbach, Excel 2013 Bible, Wiley, PAP/CDR edition, 2013
2. John Walkenbach, Excel 2013 Power Programming with VBA (Mr. Spreadsheet's Bookshelf) Wiley; PAP/CDR edition, 2013

Excel LAB

SECTION A

Introduction to Excel : Excel Introduction· Basic formulae: Entering and editing data, Creating and copying formulae, Creating· functions easily Formatting: Inserting/deleting rows/columns, Changing fonts, Colors and borders,· Merging and aligning cells Printing: Page break preview, Using page layout view, Headers and footers, Freezing· print titles Charts: Selecting data, Quick ways to create charts, Formatting your chart· Basic tables: Table styles, Using calculated columns, Header rows and total rows· Case Exercises/ Practical Assignments/Activities

SECTION B

Advanced Excel : Sorting and filtering lists/tables of data, custom sort· Number formatting: Creating custom formats, The four parts of a format, Scaling· numbers Dates and times: How dates and times are stored, Useful date/time functions,· Formatting dates and times , Conditional formatting: Creating/using cell rules, Data bars and colour sets, Styles· and themes, How themes

work, Using the default styles, Creating custom styles Validation and protection: Setting cell validation, Protecting cells/worksheets, Grouping and outlining, Cell comments Range names and absolute references: Absolute references (\$ symbol), Fixing only the row/column, Creating range names, Labelling ranges automatically, Case Exercises/ Practical Assignments/Activities

SECTION C

Advanced Excel: Excel Functions: Introduction to Mathematical Functions, Introduction to Text Functions, Introduction to Logical & Reference Functions, Introduction to Date & Time Functions, Introduction to Financial Functions, Introduction to Information Functions IF and LOOKUP functions: The conditional (IF) function, Nested Ifs, Lookup functions Case Exercises/ Practical Assignments/Activities

SECTION D

Tables and Charts : Advanced Tables, Using calculated columns, Removing duplicates, Advanced filter Pivot tables: Creating pivot tables, Swapping rows, columns and pages, Grouping fields Slicers, Pivot table slicers, Changing slicer properties Advanced charts, Creating chart templates, Combination charts, Picture charts, Custom chart types, Case Exercises/ Practical Assignments/Activities

References:

1. John Walkenbach, Excel 2013 Bible, Wiley, PAP/CDR edition, 2013
2. John Walkenbach, Excel 2013 Power Programming with VBA (Mr. Spreadsheet's Bookshelf) Wiley; PAP/CDR edition, 2013

Course Title/Code	FUNDAMENTALS OF LOGISTICS/MCH 117 B
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The Objective of this course is to gain the knowledge of possibilities of efficient optimization and management of operation in Logistics Management and also the ability to apply them in the enterprise reality.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction, Objectives, Concepts of Logistics & Integrated Logistics; Evolution of Logistics; Role of Logistics india, Information Technology.

SECTION B

Material Handling: Introduction, Objectives, Concepts of material handling; Principles of material handling; Equipment used for material handling; Points to be considered; Role of material handling in Logistics; Material handling and packaging.

SECTION C

Material Storage System & Warehousing: Introduction, Objectives, Concepts of material storage system; Storage principles; Storage methods; Concepts of Warehousing; Need for warehousing management; Evolution of warehousing; Significance and Functions of warehousing; Warehousing cost.

SECTION D

Logistical Packaging & Transportation: Introduction, Objectives, Concepts of Logistical packaging; Design considerations in packaging; Types of packaging materials; Packaging costs; Introduction of Transportation systems; Transportation infrastructure; Different modes of transportation; Freight management; Transportation network; Containerisation.

References:

1. Bowersox, Closs, Cooper, Supply Chain Logistics Management, McGraw Hill.
2. Burt, Dobbler, Starling, World Class Supply Management, TMH.
3. Donald J Bowersox, David J Closs, Logistical Management, TMH

Course Title/Code	BUSINESS COMMUNICATION II/MCH116B
Course Type:	Core
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>CO1:To develop the skills of the professional undergraduate students for proper self-expression, social communication, spoken English, correct pronunciation, voice modulation and business etiquettes.</p> <p>CO2:The students will improve their personality, communication skills and enhance their self-confidence</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Meaning; Nature; Key functions of leadership styles; Responsibilities of a Leader; Qualities of a Good Leader; Role of Communication in Delegating Responsibilities; Setting aside personal desires; Importance of Communication in Building Teams ; Leadership in Groups/Teams, Organizations, & the Public Sphere; Cultural Differences in Leadership; Leadership Communication & Ethics; Leadership Development; Creativity and Communication: Importance of Public Speaking and on Special Occasions; Qualities of a Good Speaker; Importance of Body Language; Using Humour and Wit; Structure of a Good Speech; Speaker's Credibility; Tips for Building Credibility; Grammar and Vocabulary: One- Word Substitution, Question Tags

SECTION B

Theatre and Communication

Public Communication: Orality and performance (speech, visual effects and body language – observation & enactment), Communication as Self-Expression: Writing a Script; Devising a Message; Performing a Scene; Creating Scenes from day to day life such as: Students going to school, Customer visiting a mall/mart or buying a product from the shop, etc., Body Language: Revelation of Inner Self; Communication and Self Confidence; advantages of Self Confidence; Reason of lacking Self Confidence; Negative; Shades of not being Self Confident; Myths about Self Confidence; Tips to develop Self Confidence; Creativity and Communication: Paper Reading (compeering/ anchoring: Voice Modulation, Articulation etc.) ; Grammar and Vocabulary: Idioms and Phrases, Foreign Words

SECTION C

Personality development: A must for communication and career growth, Personality: Meaning; Definition; Theories; Stages of Personality Development; Big five Personality dimensions; Major Determinants of Personality; Heredity Potentials; Environmental Influences; Relative Influences of Heredity and Environment, Nervousness: An Indispensable trait; Combating Nervousness; Understanding Self and Others; Self- concept; Perception; Communication and Self disclosure; Effective Disclosure; Openness

Communication and giving feedback; Creativity and Communication: Business Talk, Characteristics of Good Business Speaker; Importance of gestures; Practicing the Art of Business Communication; Meeting, Playing role of effective team members in a meeting (task roles, personal roles, problem roles) , Grammar and Vocabulary: Reported Speech, Phrasal Verbs

SECTION D

Levels of Communication (interpersonal, intrapersonal, group, public); Communication as a Change Agent (silence, satire, artifice)

Determinants in Impacting Communication; Social, Political, Cultural; Semiotics and Communication; Ideology and Communication

Impact of Encoding and Decoding in Communication (noise, codes, culture, technology); Communication and Gratification: Four Models: Publicity Model; Ritual Model;

Convergence Model; Reception Model; Creativity and Communication: Situation Writing and Situational Dialogues, Defining an Object (pictorial description), Expansion of Proverbs and Ideas; Grammar and Vocabulary: Synonyms, Antonyms, Reading Comprehension, Jumbled Sentences, Modifiers

Lab Exercises:

Exercises related to Grammar

Exercises related to Creativity and Writing

Mock Interviews

Extempore

Group Discussion

Debate

Role Plays (Meeting)

Final production of a one act play/ scene

Introduction to Articulation Skills (Conversation: Telephonic and Face-to-Face)

Listening to Understand (Hearing vs. Listening)

Listening for Inter-personal Effectiveness

Techniques & Levels of Reading Comprehension

References:

1. Amodio, Mark C. Writing the Oral Tradition: Oral Poetics and Literate Culture in Medieval England; 1st ed., ND University of Notre Dame Press, 2004.
2. Barun K. Mitra, Personality Development and Soft Skills, 2nd ed., Oxford University Press, 2011.
3. Beardsley, M. C., "Aspects of Orality: A Short Commentary", New Literary History 8,3 Spring 1977.
4. Bel, B. et al., Media and Mediation, 1st ed., Sage, New Delhi. 2005.
5. Bernet, John R, Mass Communication, An Introduction, Prentice Hall. 1989.
6. ConarNira, Communication Skills for Professionals, 2nd ed., PHI Pvt. Ltd.
7. Fiske, John, Introduction to Communication Studies, 2nd ed. Routledge. 1990.

8. Guffey Mary Ellen, Business Communication: Process and Product, 5thed, South-Western,Thomson Publishing, 2005.
9. Hurlock, B Elizabeth; Personality Development, 1st ed., Tata McGraw Hill. 1976.
10. McQuail, Dennis, Mass Communication Theory, 4th ed., London, Sage. 2000.
11. Pareek Udai; Understanding Organizational Behaviour, 2nd ed., OxfordUniversity Press; 3 ed. 2011.
12. Penrose and Rasberry, Business Communication for Managers: An advanced approach, 5ed., Cengage Learning, 2007.
13. Pushpa Lata, Kumar Sanjay, Communicate or Collapse: A Handbook of Effective Public Speaking, Group Discussions and Interviews, 1 st ed., PHI Pvt. Ltd. 2007
14. Rogets Thesaurus of English Words and Phrases, Penguin Reference; by George Davidson (Editor), Paperback 2004.
15. Schechter Joel Popular Theatre: A Sourcebook, Routledge, 2013.
16. Viswanathan Rajeesh, Business Communication, Himalaya Publishing House, Mumbai, India, 2011.
17. Wren & Martin; New Ed. ; High School;English Grammar & Composition Revised by N.D.V. Prasada Rao; S. Chand, Paperback
18. Yukl G; Leadership in Organisation: 8 th ed., Prentice- Hall. 2013

Course Title/Code	PROFESSIONAL DEVELOPMENT PROGRAM I / CDO101B
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Course Type:	UC
Course Nature:	Soft
L-T-P-O Structure	1-0-0-0
Prerequisites	Nil
Course Objectives	<p>CO1:To develop effective presentation skills.</p> <p>CO2:To become self-aware individuals by assessing one’s own strengths, weaknesses, opportunities and threats.</p> <p>CO3:To enable students to create broad career plans, evaluate the employment market, identify the industries they are interested in, Identify the companies they would like to work with, and identify the departments in a company they would like to work in.</p> <p>CO4:To understand nuances of team work.</p> <p>CO5:To understand how cultures affects communication and identify essentials of effective cross cultural communication.</p> <p>CO6:To appreciate importance of creativity in problem solving.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Parts of Speech, Tense, Active and Passive Voice, Sentence, Words often confused, Identifying & Analyzing Grammatical Errors in sentences related to pronoun, Article, Verb, Preposition

SECTION B

Introduction to Business Communication: Basic forms of communication, Process of communication, Principles of effective Business Communication, 7 Cs.; Media of Communication: Types of communication: Barriers of communication (Practical exercise in communication); Introduction to Business Communication: Basic forms of communicating; Communication models and processes; Effective communication; Theories of Communication.; Self-Development and Communication: Development of positive personal attitudes

SECTION C

Corporate Communication: Formal and informal communication networks; Grapevine; Miscommunication (Barriers); Improving communication. ; Practices in business communication; Group discussions; Mock interviews; Seminars; Effective listening exercises; Individual and group presentations and reports writing, Principles of Effective Communication. ; Business manners, Body language gestures, Etiquette of the written word, Etiquette of the telephone, handling business meetings. Case Studies

SECTION D

Business letter writing: Need, Functions and Kinds, Layout of letter writing. Types of letter writing: Persuasive letters, Request letters, Sales letters, Complaints and Adjustments; Departmental Communication: Meaning, Need and types: Interview letters, Promotion Letters, Resignation letters, Newsletters, Circulars, Agenda, Notice, Office memorandums, Office orders, Press release, Report writing; Technology Enabled Communication: E-mail etiquettes and writing.

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective/University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH208 B	TOTAL QUALITY MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	0	3	3
MCH209 B	WAREHOUSING MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	0	3	3
MCH201 B	BUSINESS LAW	DMC	HARD	CORE	3	0	0	0	3	3
ECH212 B	MANAGEMENT INFORMATION SYSTEMS	ECE	HARD	CORE	2	0	2	0	4	3
MCH202 B	CONSUMER BEHAVIOUR	DMC	HARD	CORE	3	0	0	0	3	3
MCH203 B	OPERATIONS MANAGEMENT	DMC	HARD	CORE	3	0	0	0	3	3
FLS101, 102,103	FOREIGN LANGUAGE	MRVFL	SOFT	UC	2	0	0	0	2	1
CHH137	ENVIRONMENTAL SCIENCES	CHEM DEPT	HARD	UC	2	0	0	0	2	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					21	0	2	0	23	21

Course Title/Code	TOTAL QUALITY MANAGEMENT/MCH208B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The key objective of this course is to acquaint the students with the conceptualization of Total Quality (TQ) from design assurance to processes assurance to service assurance. The dimensions of quality in services in the contemporary environment are also to be emphasized.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Total Quality management, Historical background of TQM. Concept of Total Quality and its evolution, Components of a Total Quality Loop. Quality of Design; Quality of Purchasing; Supplier qualification, Critical-to-Quality Characteristics: Attributes and Variables, Planning for quality -Flowcharting, Detailed flow process charts and flow diagrams, Planning for just-in-time (JIT) management, System design and contents, System documentation, implementation and assessment

SECTION B

Measurement of quality- Costs of quality, Tools and techniques for quality improvement, Statistical process control, Quality improvement techniques in service industries. Theory of Acceptance Sampling, Statistical Process Control, Process Capability

Studies, Concept of Six Sigma and its application. Training for Total Quality Management-Scope of requirements and identification of training needs, Design of training programmes, Evaluation of training programmes, Performance improvement worksheets, Follow-up of training programmes

SECTION C

Quality of design - Quality of conformance to design, Control of non-conforming products, identifying and classifying non-conformance, re-inspection of repaired and reworked products, Corrective and preventive action. Organization of Quality improvement efforts, Quality improvement tools, Quality Function Deployment (QFD), Introduction to the concept of (Total Productive Maintenance) TPM.

SECTION D

Failure Mode and Effects Analysis (FMEA)/FTA, Quality Costs and Audit, Lead Assessment, Marketing aspects of total quality, Total Quality of Services, Total Quality and Environment and Safety: Introduction to relevant standards. Internal quality audits- Scope of requirements and audit procedures. The audit program and planning of quality audits, verifying compliance with planned arrangements. Stages in the evolution of a company's improvement capability: Traditional approach, structured continuous improvement, goal-oriented continuous improvement, proactive/empowered continuous improvement, full continuous improvement capability (the learning organization)

References:

1. Besterfield, D. H., Besterfield-Michna, C., Besterfield, G. H., & BesterfieldSacre, M. (2006). Total quality management (3rd ed.). New Delhi: Pearson Education.
2. Dale, B. G. (2003). Managing quality. UK: Blackwell Publishing.
Faculty of Management Studies, University of Delhi
3. De Feo, J. A., & Barnard, W. W. (2005). Juran's institute: six sigma breakthrough and beyond: Quality performance breakthrough methods. New Delhi: Tata McGraw Hill.
4. IS/ISO 9001:2000. (2000). New Delhi: Bureau of Indian Standards.

5. Narayan, V., Wardhaugh, J. W., & Das, M. C. (2008). 100 years in maintenance and reliability. New York: Industrial Press.

Course Title/Code	WAREHOUSE MANAGEMENT/ MCH209B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Understand the concept and application of warehouse management in logistics industry

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Warehousing Management: Definitions, Warehousing & Its characteristics, Role of Warehousing, Types of Warehouses, Role of Warehouse manager, Storage Policies Terminologies in warehousing, Introduction to warehousing processes -, Warehouse Receiving & Put- Away.

SECTION B

Warehouse Processes: Pick Preparation, Picking Strategies and equipments, order picking methods, Warehouse processes from replenishment to dispatch.

SECTION C

Warehouse Management System (WMS): Introduction need and process, Introduction to Warehouse Layout & Design, examples of layout of the large players in e-commerce industry in Indian context. Storage and handling equipment used in warehousing

SECTION D

Resourcing a warehouse, Warehouse cost, Use of Information Communication Technology in warehousing, Outsourcing, Development and trends in warehousing - The Warehouse of the future.

References:

1. Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse - Gwynne Richards
2. World-Class Warehousing and Material Handling --By Edward Frazelle
3. Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse - BY Gwynne Richards
4. Excellence in Warehouse Management - Stuart Emmett

Course Title/Code	BUSINESS LAW/MCH201B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>CO1: To acquaint the students with the fundamental knowledge of Business Law and Indian Contract Act.</p> <p>CO2: To identify and interpret the different contracts like Indemnity, Bailment, Pledge, Guarantee etc in context of day to day life</p> <p>CO3: To analyze and understand the concepts and implications of Sales of Goods Act, 1930, Negotiable Instrument Instrument Act, 1881</p> <p>CO4: To acquaint the students with the basic knowledge of Indian Companies Act, 2013</p> <p>CO5: To make the students understand and analyze the practical working of a company and its nitty-gritties.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Indian Contract Act, 1872 (Fundamental Knowledge) Essentials of valid contract, discharge of contract, remedies for breach of contract.

SECTION B

Contracts of Indemnity, Guarantee, Bailment, Pledge and Agency

SECTION C

Sale of Goods Act 1930 Meaning of Sale and Goods, Conditions and Warranties, Transfer of Property, Rights of an unpaid seller.

The Negotiable Instruments Act 1881 – Essentials of Negotiable instruments, Kinds of N.I. Holder and Holder in Due Course, Negotiation by endorsements, crossing of a cheque and Dishonor of a cheque.

SECTION D

The Companies Act 1956 (Basic elementary knowledge) essential characteristics of a company, types of companies, memorandum and articles of association prospectus, shares – kinds, allotment and transfer, debentures, essential conditions for a valid meeting, kinds of meetings and resolutions.

Directors, Managing Directors, their appointment, qualifications, powers and limits on their remuneration, prevention of oppression and mismanagement

References:

1. M.C. Kuchhal&VivekKuchhal, Business Law, 6thed, Vikas Publishing House, New Delhi, 2013
2. Bagrial, Ashok; Company Law, 12thed, Vikas Publishing House, 2012
3. Kapoor, N. D., “Elements of Mercantile Law”, Sultan Chand & Sons, New Delhi,2003
4. Kapoor, N. D.; Elements of Company Law, Sultan Chand & Sons, New Delhi, 2003.
5. Sen and Mitra; Commercial Law including co. law, 23rd ed, World Press Calcutta ,2002.
6. Jhabvala, N.H.; Law of Contracts, C. Jamnadas& Co. Mumbai., 2017
7. Jhabvala, N.H.; Consumer Protection Act, C. Jamnadas& Co. Mumbai., 2017

8. Dr. Singh, Avtar; Company Law, 17thed, Eastern Book Co. Lucknow, Bharat Law House, Delhi, 2018
9. Maheshwari, S.N. and S.K. Maheshwari; A Manual of Business Law, 2nd Edition, Himalaya Publishing House, 2015.

Course Title/Code	CONSUMER BEHAVIOUR/MCH 202B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>CO1:To understand consumer behaviour in an informed and systematic way.</p> <p>CO2:To analyse personal, socio-cultural, and environmental dimensions that influence consumer decisions making.</p> <p>CO3:To enable students in designing and evaluating the marketing strategies based on fundamentals of consumer buying behaviour.</p> <p>CO4:To give the students a perspective to understand the application of market research in framing effective marketing strategies..</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Consumer Behavior: Concept, diversity of consumer behavior, Characteristics of Indian Consumers, Consumer behavior and marketing strategies. Consumerism: Evolution of consumer society. Definition of consumerism, buyers & sellers' rights, effects of consumerism. Consumer Research.

SECTION B

Individual Determinants of Behavior- Personality, perception, attitude (attitudinal models), learning, Motivation, Group influence on consumer behaviour

SECTION C

Opinion leaders. Culture, Sub-culture, Cultural relevance to marketing decisions, Characteristics of culture, Cultural Values, Cultural Changes, Cross cultural understandings. Family: Role & Structure, Family Life Cycle, Diffusion of innovations: the diffusion process – the adoption process - consumer innovativeness and personality traits

SECTION D

Consumer decision making: Consumer Decision Making Process, Models of consumer decision making- Kollatt-Blackwell model, Howard-Sheth Model, Bettman's Model, Concept of involvement & extensive problem solving - limited problem solving – routinized responsive behavior. Organizational Buying: Concept & comparison with Consumer buying

References:

1. Blackwell, Roger, Miniard, Paul & Engel, James; Consumer Behaviour; 10thed, Thomson Learning; New Delhi, 2009
2. Loudon, David J. & Dellabitta, Albert; Consumer Behaviour; 11thed, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2014.

3. Schiffman, Leon G. & Kanuk, Leslie Lazar; Consumer Behaviour; 10th revised ed, Pearson Education; New Delhi, 2010
4. Schiffman, Leon G. and Joseph Wisenblit, Consumer Behaviour; Pearson N.Y, , 2018
5. Solomon, Michael R.; Consumer Behaviour – Buying, Having and Being, 5thed, Pearson Education; New Delhi, 2004.
6. Assel Henry, (2005), Consumer Behaviour, Biztantra, New Delhi, 2005..
7. Seth, J. N. & Mittal, B., Customer Behaviour-A Managerial Perspective, 2nded, Thomson South-Western, 2004

Course Title/Code	OPERATIONS MANAGEMENT / MCH203B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	<p>CO1:Apply decision-support tools to business decision making.</p> <p>CO2:Construct and present effective oral and written forms of professional communication.</p> <p>CO3:Apply knowledge of business concepts and functions in an integrated manner.</p> <p>CO4:Use specialized knowledge in Operations Management to solve business processes.</p> <p>CO5:Apply knowledge of fundamental concepts of operations management</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

What is operations management? Operations management is important in all types of organization, The input–transformation–output process, The process hierarchy, Operations processes have different characteristics, The activities of operations management, The quality objective, The speed objective, The dependability objective, The flexibility objective, The cost objective, Trade-offs between performance objectives, What is strategy and what is operations strategy?

SECTION B

What is layout? The basic layout types, what type of layout should an operation choose? Detailed design of the layout, what is process technology? Understanding process technologies, evaluating process technologies, implementing process technologies, what is capacity management, Measuring demand and capacity, the alternative capacity plans, choosing a capacity planning and control approach, Capacity planning as a queuing problem

SECTION C

What is inventory? Why is inventory necessary? Some disadvantages of holding inventory, the volume decision – how much to order, the timing decision – when to place an order, Inventory analysis and control systems, what is supply chain management? The activities of supply chain management, Types of relationships in supply chains

SECTION D

What is ERP? How did ERP develop? Implementation of ERP systems, Master production schedule, The bill of materials (BOM), Inventory records, What is lean synchronization? Eliminate waste, Lean synchronization and other approaches, what is quality and why is it so important? Diagnosing quality problems, Conformance to specification, Total quality management (TQM)

References:

1. Schmenner, R. Production/Operations Management. 5th ed. Macmillan Publishing Company, 1992.
2. Nahmias, S. Production and Operations Analysis. 2nd ed. Irwin, 1993.
3. Chase, Jacobs and Aquilano, Operations Management for Competitive advantages, Tata McGraw-Hill Education Pvt. Ltd. (2010)
4. Gerard Cachon and Christian Terwiesch., Matching Supply with Demand. 4thed, McGraw-Hill in 2016.

Course Title/Code	MANAGEMENT INFORMATION SYSTEMS/ ECH212B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	2-0-2-0
Course Objectives	CO1:Understand and apply core knowledge in Management Information Systems (MIS) CO2:Identify and analyze requirements for information systems CO3:Understand and apply design principles in Information Systems CO4:Understand and apply system development & project management principles CO5:Effectively evaluate technology alternatives to solve problems in an MIS context CO6:Effectively communicate to both business and IT professionals

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Data, Information, Knowledge, MIS: Need, Purpose and Objectives, MIS and Decision Making Concepts, Herbert Model of Decision Making, Concept of Information, Classification of Information, Value of Information, MIS and Information Concepts

SECTION B

Concept of SAD, Need of SAD, Process of SAD, MIS and System Analysis, Implementation of MIS

SECTION C

Planning, Designing of MIS, Decision Support Systems - Overview, Components and Classification, Steps in constructing a DSS, Philosophy of DSS

SECTION D

Introduction to ERP, Structure of ERP, Concepts of DBMS, Concepts of RDBM, ER Modeling

References:

1. Kroenke, D. M., Gemino, A., & Tingling, P. "Experiencing MIS (4th Canadian Edition). Toronto: Pearson., 2016.
2. Poatsy, M. A., Cameron, E., Williams, J., & Grauer, R." Exploring Microsoft Office Access 2016", Comprehensive. Boston: Pearson Education Inc. , 2017.
3. Kenneth C Laudon & Jane P. Laydon, Management Information Systems, 13thed, , Pearson Education Limited, 2014

Course Title/Code	ENVIRONMENTAL SCIENCES /CHH137
Course Type:	Core(Allied)
Course Nature:	Hard
L-T-P-O Structure	2-0-0-2
Course Objectives	Student will be able to understand strategic cost management process

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Multidisciplinary nature of environmental studies, Definition, scope and importance; Need for public awareness., Renewable and non-renewable resources :

Natural resources and associated problems.

- a. Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
- b. Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- c. Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

- d. Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- e. Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
- f. Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- g. Role of an individual in conservation of natural resources.
- h. Equitable use of resources for sustainable lifestyles.

SECTION B

Ecosystems: Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem., Ecological succession., Food chains, food webs and ecological pyramids, Introduction, types, characteristic features, structure and function of the following ecosystem :-

- a. Forest ecosystem
- b. Grassland ecosystem
- c. Desert ecosystem
- d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Biodiversity and its conservation: Introduction – Definition : genetic, species and ecosystem diversity., Biogeographical classification of India, Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values, Biodiversity at global, National and local levels, India as a mega-diversity nation, Hot-spots of biodiversity., Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India, Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

SECTION C

Environmental Pollution, **Definition**, Cause, effects and control measures of :-

- a. Air pollution
- b. Water pollution

- c. Soil pollution
- d. Marine pollution
- e. Noise pollution
- f. Thermal pollution
- g. Nuclear hazards

Solid waste Management : Causes, effects and control measures of urban and industrial wastes., Role of an individual in prevention of pollution, Pollution case studies, Disaster management : floods, earthquake, cyclone and landslides.

Social Issues and the Environment

From Unsustainable to Sustainable development, Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people; its problems and concerns. Case Studies, Environmental ethics : Issues and possible solutions., Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies, Wasteland reclamation, Consumerism and waste products., Environment Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act

SECTION D

Human Population and the Environment: Population growth, variation among nations, Population explosion – Family Welfare Programme, Environment and human health, Human Rights, Value Education, HIV/AIDS, Women and Child Welfare., Role of Information Technology in Environment and human health, Case Studies.

References:

1. Environmental Chemistry C. Baird and M. Cann W.H. Freeman and Company, New York, 2012.

1. Green Chemistry and engineering: A practical Design Approach C.J-Gonzalez and D.J.C. Constable A John Wiley & Sons, INC., publication, New Jersey, 2011

1. Environmental Chemistry S.E. Manahan CRC Press, 2005

Perspectives in Environmental Studies Kaushik & Kaushik New age international publishers Ltd.-New Delhi

1. The Green marketing Manifesto John Grant Wiley Pub.

ENVIRONMENTAL SCIENCES PRACTICAL (CHH137) –FIELD WORK

1. Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain
2. Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
3. Study of common plants, insects, birds.
4. Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5 lecture hours)

References:

1. Saha, B. Environmental Sciences and Sustainable Development, International Conference on Environmental Science and Sustainable Development- 2015, World Scientific Publishing Co. Pvt. Ltd, 2015.
2. Thakur, V. A Text Book of Environmental Sciences, Scientific Publishers, 2012
3. Granjou, C. Environmental Changes: The Futures of nature, ISTE Press Elsevier, 2016.

SEMESTER IV

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NAME (Hard/Soft/Workshop/Online)	COURSE TYPE (Core/Elective/University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH218 B	SERVICES MARKETING	DM C	HA RD	CORE	3	0	0	0	3	3
MCH215 B	SUPPLY CHAIN MANAGEMENT	DM C	HA RD	CORE	3	0	0	0	3	3
MCH231 B	PROJECT MANAGEMENT	DM C	HA RD	ELECTIVE	3	0	0	0	3	3
MCH232 B	FREIGHT TRANSPORT MANAGEMENT	DM C	HA RD	ELECTIVE	3	0	0	0	3	3
MCH217 B	RESEARCH METHODOLOGY	DM C	HA RD	CORE	3	0	0	0	3	3
MCH233 B	APPLIED OPERATIONS MANAGEMENT PROJECT	DM C	NTC C	ELECTIVE	0	0	0	8	0	8
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					15	0	0	8	15	23

Course Title/Code	SERVICES MARKETING /MCH218B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	Participants who master the course material will acquire knowledge about the various disciplines contribution in understanding buyer behavior in a holistic manner. He/she will acquaint with the advances in consumer research in deciphering buyer motivation, behavior (pre-purchase, purchase and post purchase) and impact of social and cultural variables on consumption decisions. The participants will get equipped with frameworks to analyze consumer's behavior and use them in designing marketing strategies and in enhancing the effectiveness of marketing programs.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction Growth of the service sector, the concept of service, Characteristics of Service – Classification of service – Designing of the service, blueprinting, using technology developing, human resources, building service aspirations

SECTION B

Marketing Mix In Service Marketing: The Seven Ps: Product decision, Pricing, Strategies and tactics, Promotion of service and placing of distribution methods for services. Additional dimension in services marketing – People, physical evidence and process

SECTION C

Effective Management Of Service Marketing: Marketing Demand and Supply through capacity planning and segmentation – Internal marketing of Services – External versus Internal orientation of service strategy

SECTION D

Delivering Quality Service:

Causes of Service – Quality gaps, the customer expectations versus perceived service gap.

Factors and Techniques to resolve this gap Customer Relationship Management. Gaps in

Services – Quality standards, factors and solutions – The service performance gap – Key factors and strategies for closing the gap, External communication to the customers – The promise

versus delivery gap – Developing appropriate and effective communication about service quality

Marketing Of Service With Special Reference To:

1. Financial Services 2. Health Service 3.Hospitality Services including travel, hotels and tourism 4. Professional Service 5.Public Utility Services 6.Educational Services

References:

- 1 Joachen Wirtz,Patricia Chew and Christopler Lovelock, Essentials of Services Marketing, 2nd ed, Pearson Education, South Asia Ltd, 2013.
- 2 Adrian Payne, The Essence of Marketing New Delhi, Prentice Hall of India Pvt. Ltd., 2001.
- 3 Chistopher lovelock, Services Marketing, 4th edn, Pearson Education Asia, 2001.
- 4 Christopher Lovelock and Joachen Wirtz, Services Marketing: People, Technology, Strategy, Prentice Hall, 7th edition, 2011
- 5 K. Douglas Hoffman, John. E.G. Bateson, Essentials of Service Marketing, 2nd edn, Thomson – South Western , 2002.

- 6 Helen Woodroffe – Services Marketing, Mcmillan India Ltd., 1997.
- 7 S.M. Jha, Services Marketing, New Delhi Himalaya Publishing House, 2000.

Course Title/Code	SUPPLY CHAIN MANAGEMENT / MCH215B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	At the completion of this course, the student should be able to examine the design and performance of supply networks and processes in different business contexts. Students develop capabilities in logistics, digital coordination for supply chain integration, inventory management, risk pooling, procurement, product and process design, and international supply chain management

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to SCM What is SCM; Key Issues in SCM; Inventory Management , Economic lot size model ;Periodic review policy ;Continuous review policy; Managing inventory in the supply chain

SECTION B

Network Planning Network design Inventory positioning and; make-to-stock supply chain Contracts for make-to-order supply chain Contracts; The bullwhip effect Supply; supply chain trade-offs; Centralized and decentralized decision making and performance impacts

SECTION C

Supply Chain Integration Functional Products Innovative products efficient supply chains
Responsive supply chains agile supply chains; Strategic Alliances Framework for strategic
alliances Third-party logistics Retailer-Supplier Partnerships; Distribution Strategies

SECTION D

Procurement and Outsourcing Strategies Outsourcing benefits and risks, A Framework for
Buy/Make Decisions Procurement , strategies E-Procurement; Global Logistics and Risk
Management ;development Mass customization; Information Technology Business Processes
Supply Chain IT Innovations Technology standards

References:

1. Douglas M. Lambert (ed), Supply Chain Management: Processes, Partnerships, Performance, 2nd Ed, The Supply Chain Management Institute, FL. 2006
2. Schmenner, R. Production/Operations Management. 5th ed. Macmillan Publishing Company, 1992.
3. Nahmias, S. Production and Operations Analysis. 2nd ed. Irwin, 1993.
4. Chase, Jacobs and Aquilano , Operations Management for Competitive advantages, Tata McGraw-Hill Education Pvt. Ltd. (2010)
5. Gerard Cachon and Christian Terwiesch., Matching Supply with Demand. 4th ed, McGraw-Hill in 2016.

Course Title/Code	RESEARCH METHODOLOGY /MCH217B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	<p>CO1: This course will provide a comprehensive introduction to the subject of Business research, and discuss some key concepts, process and techniques, and their applications.</p> <p>CO2: After completion of this course, students will gain an appreciation for some of the breadth and depth of this subject and its significance for a business enterprise.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Basic Concepts of Research: Business research; its concept, nature, scope, need and managerial value of business research; Research: Its objectives and types. Definitions: concepts, constructs, variables, Formulation of Research Problem; Steps of research & Research ethics. Research Design: Types of Research Design; Factors Affecting Research Design. Literature Review.

SECTION B

Sampling Methods and Techniques: Basic Concepts, Characteristics of a good sample, Sampling Frame, Sampling errors, Non Sampling errors, Types of sampling: Probability Sample, Non Probability sampling. Measurement of Data: Concept of Measurement: what is measured, Problems in measurement in management research - Validity and Reliability. Levels of

measurement - Nominal, Ordinal, Interval, Ratio scales. Attitude Scaling Techniques: Rating Scales and Ranking Scales – Paired Comparison & Forced Ranking - Concept and Application. Types of Data - Primary Data, secondary data; data Collection - Questionnaire Method: Questionnaire Construction - Personal Interviews, Telephonic survey interviewing, and observational methods; editing, coding, content analysis

SECTION C

Hypothesis Formulation: An overview of non-parametric tests (Wilcoxon Matched – pairs signed – rank test, Mann – Whitney test, Kruskal – Wallis H-test), Introduction to Multivariate Analysis: Factor Analysis; Discriminant Analysis; Cluster Analysis; Dimensional Analysis; Conjoint Analysis.

SECTION D

Presentation of Results: Report writing: Purpose of a Report; Essentials of a Good Report; Format of a Report; Types of Report Presentation, procedure of preparation of reference and bibliography (APA model)

References:

1. WG Zikmund, BJ Babin, JC Carr, M Griffin., Business Research Methods, 8th ed, Thomson Learning, Bombay House, 2013.
2. T N Srivastava, Shailaja Rego, Business Research Methods, 2nd ed, Tata McGraw- Hill Companies, 2008
3. Naresh K. Malhotra, David F. Birks, Daniel Nunan, Marketing Research: An Applied Approach, 5th ed, Pearson Education, New Delhi, 2017.
4. Deepak Chawla, Neena Sondhi, Research Methodology, Vikas Publications, 2011
5. Prahlad Mishra, Business Research Methods: 1st ed, Oxford India, 2015

Course Title/Code	FREIGHT TRANSPORT MANAGEMENT MCH232B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	The course acquaints the student to the concept and importance of material logistics and distribution task like transportation and warehousing.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to freight management. Freight on Board. Material Logistics : Concept and Importance of Material Logistics. Logistic Tasks: Follow-up of Order, Transportation, Warehousing, Inventory Control, Information Monitoring. Freight Planning: Major Aspects and Factors

SECTION B

Transportation: A Brief Study of different modes of transport used for movement of materials, their relative advantages, disadvantages and suitability. Road Transport: Road System, Role of Road Transport in Movement of Materials, Role of National Highway Authority of India, Limitations of Road Transport System, Consignment Rail transport: India Railway Network and Role in Transportation of Materials and Cargo, Consignment Note.

SECTION C

Air transport: Role of Air Transport in Domestic and International Transportation of Goods. Role of Ministry of Civil Aviation, Airport Authority of India and Directorate General of Civil Aviation, Air Waybill, Contract of affreightment

Water transport: Inland Water Transport : Role of Inland Water Transport Inland Waterways: Inland Waterways Authority of India. Ocean transport: Role of Ocean Transport in International Trade, Structure of Shipping . Services – Liner Shipping and Tramp/Charter Shipping, Conference System and Determination of Rates, Bill of Lading and Charter Party.

Rail Transport and role of rail transport in Indian and global context

SECTION D

Multi-Model Transport System: Concept and advantages of Multi-Model Transport System. Containerization: Need and Advantages of Containerization, Inland Container Depots (ICDs) and Container Freight Stations (CFSs).Basics of Warehousing. Elements and Functions of Warehousing. Role of Warehousing in Economic Development, Types of Warehousing, Advantages of a Public Warehouse, Costs Associated with Warehousing.

References:

1. Dutta A.K., Materials Management: Procedures, Text and cases, Prentice Hall of India Pvt. Ltd., New Delhi.
2. Gopalakrishnan, P. and Sundareson, M., Materials Management: An Integrated Approach, Prentice Hall of India Pvt. Ltd., New Delhi.
3. Varma, M.M., Essentials of Storekeeping and Purchasing, Sultan Chand and Sons, New Delhi.
4. Shah N.M. An Integrated concept of Materials Management, Indian Institute of Materials Management, Baroda Branch, Baroda.
5. Sharma S.C., Material Management and Materials Handling, Khanna Publishers, New Delhi.
6. Arnold, Champman and Ramakrishnan, Introduction to Materials Management 5th ed., 2007 Pearson Education, Inc.

7. Pooler Victor H. Purchasing and Supply Management, Creating the Vision, New York, Chapman & Hall, 19997.
8. Dutta A.K., Material Management, Inventory Control and Logistics, Jaicoi Publishing House, Mumbai.
9. Roy Chaudhary, E.K. : Logistics Management
10. Sharma SC: Warehousing and Distribution.
11. Gopalakrishna, P. and Shandilya M.S. : Stores Management and Logistics.
12. Martin Christopher : Logistics – The Strategic Issues.

Course Title/Code	PROJECT MANAGEMENT - MCH231B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Understand the concept and application project management

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to project management. Objectives of Project Planning, monitoring and control of investment projects. Social cost benefit analysis, identification of investment opportunities. Project rating index. Market and Demand analysis. Collection of primary and secondary information. Demand forecasting and market planning

SECTION B

Technical Analysis, Manufacturing process / technology, Material inputs & utilities, Product Mix, Plant Capacity, Location & site, Machinery & Equipment, Structures & Civil work, Environmental aspects, Project Charts & Layouts, Project Time Lines. Issues in Project Planning and Management.

SECTION C

Cost of projects, Means of financing, Estimates of Sales & Production, Cost of Production, Working Capital Requirement & Financing, Projected income statement, Balance sheet and cash flow with multi year projections,

Consideration of alternative sources of finance. Cost and Time Management issues in Project planning and management.

SECTION D

Project Implementation: Forms of project organization, Project control & control charts, Human aspects of project management, Prerequisites for a successful project implementation, Introduction to project network & determination of critical path, Preparation of comprehensive project report.

References:

1. P.Chandra, Project Planning : Analysis ,Implementation and Review
2. V.Desai, Project management
3. Bhavesh.M.Patel, Project management
4. Chandra. Prasanna, Project Preparation Appraisal and Implementation. Tata
5. McGraw Hill.
6. Gray, Clifford .F. Project Management. McGraw Hill

SEMESTER V

SEMESTER V

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTC)	COURSE TYPE (Core/Elective/University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH301 B	CUSTOMER RELATIONSHIP MANAGEMENT	DMC	HARD	CORE	3	0	0	0	3	3
MCH302 B	INTERNATIONAL BUSINESS	DMC	HARD	CORE	3	0	0	0	3	3
MCH303 B	STRATEGIC MANAGEMENT	DMC	HARD	CORE	3	0	0	0	3	3
MCH313 B	LOGISTICS AND INTERNATINAL SUPPLY CHAIN MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	0	3	3
MCH314 B	PURCHASING AND INVENTORY MANAGEMENT	ME	HARD	ELECTIVE	3	0	0	0	3	3
MCH315 B	SERVICE OPERATIONS MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	0	3	3
CDS305B	PROFESSIONAL DEVELOPMENT PROGRAMME V	CDC	SOFT	UC	1	0	1	0	2	0
CSW35	Website Designing	CS	Work	COR	0	0	3	0	3	1.5

1B		T	ksh	E						
EDS289/EDS290/EDS288/PSE301/LWS325/LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/LAW/PSY	SOFT	ALLIED ELECTIVE	1	0	2	0	3	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					20	0	6	0	26	21.5

Course Title/Code	CUSTOMER RELATIONSHIP MANAGEMENT/MCH301B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>Students should be able to</p> <p>CO1: Acquire the conceptual understanding of Customer Relationship Management.</p> <p>CO2: Design, develop & integrate CRM mechanism in organization.</p> <p>CO3: Develop strategies to use CRM for a competitive advantage</p>

	Sections	Weightage
	A	25%
	B	25%
	C	25%

Syllabus	D	25%
	TOTAL	100%

SECTION A

Fundamentals of CRM: Introduction, Emergence of CRM Practice, Factors Responsible for Growth of CRM, CRM Cycle , Stakeholders in CRM, Significance of CRM, Customer Relationship Management Comprehension and Implementation Model, CRM Comprehension, Components of CRM Programme, CRM Value Chain, CRM Process: A Historical Perspective, CRM Process: Modern Variables, Designing a CRM Implementation Model. Case Study

SECTION B

Dimensions of CRM: Customer Satisfaction: Meaning and Definition, Components of Customer Satisfaction, Customer Satisfaction Models, Rationale of Customer Satisfaction, Concept and Significance of Customer Loyalty, Defining Customer Loyalty, Customer Loyalty Ladder, Loyalty Principles, Rationale of Customer Loyalty, Other Advantages of Customer Loyalty, Dimensions of Customer Loyalty, Attitudinal Loyalty, Behavioural Loyalty, Determinants of Customer Loyalty, Factors Affecting Customer Loyalty, case study

SECTION C

IT in CRM: e-CRM: An Information Technology Tool, e-CRM in Business, CRM: A Changing Perspective, Features of e-CRM, Advantages of e-CRM, Technologies of e-CRM, Functional Components of CRM Solution, Important CRM Software Programs, Database Management

Database Construction, Data Warehousing, Data Mining, Characteristics of Data Mining, Data Mining Tools and Techniques.

SECTION D

Dynamics in CRM: CRM: A Cost-Benefit Analysis, Customer Value, Customer Lifetime Value, The Lifetime Value Equation, Customer Profitability, Customer Classification Based on Customer Profitability, Customer Profitability as Strategic Measurement Tool, Customer Profitability and Company Value.

Text Book:

Rai, Alok Kumar. Customer Relationship Management: Concepts and Cases.

Reference book:

1. Customer Relationship Management: Concept, Strategy, and Tools - By V. Kumar, Werner Reinartz - Springer, Second Edition
2. Customer Relationship Management - Francis Buttle - Butterworth-Heinemann is an imprint of Elsevier, Second Edition
3. Managing Customer Experience and Relationships - Don Peppers, Martha Rogers - Wiley & Sons, Third Edition

Course Title/Code	INTERNATIONAL BUSINESS/MCH302B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>Students will develop</p> <p>CO1:A thorough understanding of the factors that determine the business environment of emerging markets, the relevant changes over time, and the implications for corporate strategies devised for those markets</p> <p>CO2:Acquire knowledge and understanding of business and its functional fields (management and organization, human resources, accounting, finance, operations, and marketing).</p> <p>CO3:Got insights of the global monetary system and explain the role and importance of International Organizations</p> <p>CO4:learner’s judgment will be tested through critically evaluating existing research, questioning the status quo, and providing alternative solution possibilities; and, recognize the international dimension of business.</p>

	Sections	Weightage
	A	25%
	B	25%
	C	25%

Syllabus	D	25%
	TOTAL	100%

SECTION A

Introduction- Theories of International trade, Globalization forces-meaning, dimensions and stages in it, Tariff and non tariff barriers, Trading blocs.

SECTION B

Analysis of Global Environment – Political, Social, Legal, Economic & Technological, Country risk analysis, Threats and Opportunities to International Business, Rise of new economies-BRICS & ASIAN countries.

SECTION C

Global Monetary System - International Monetary Systems & Role played by IMF and World Bank, Balance of payments, International Finance and Foreign Exchange , Introduction to export and import and modes of payment in it.

SECTION D

Global Operations - Global Production, Outsourcing and Logistics Management, Global HRM, Global Marketing. South East Asian currency crisis, Foreign Direct Investment.

References:

1. International Business, Charles W L Hill & Arun K.Jain (Tata McGraw-Hill, 6th edition)
2. International Business, Cherunilam, Francis, Text and Cases (PHI, Fourth edition (Revised))

3. International Business, Justin Paul (Prentice Hall)
4. International Business, Dr. P. Subba Rao (Himalaya Publications, 2nd Revised Enlarged edition)

Course Title/Code	STRATEGIC MANAGEMENT/MCH303B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>CO1:-Describe & identify the dynamic environment of Business Management .</p> <p>CO2:Examine & understand the need & importance of of Strategic Management</p> <p>CO3: Analyse and interpret Porter s Five force model & demonstrate Value chain analysis</p> <p>CO4: evaluate & summarize the various corporate strategies adopted by the companies for sustenance of business</p> <p>CO5: Evaluate & compare various evaluation techniques of strategic & Operational Implementation</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Nature of Strategic Management: Definition of strategic Management, Need for strategic management, Levels of strategy, Strategic management process, Defining Vision and Mission of a company.

SECTION B

External Assessment & Internal Assessment: Environmental Scanning with respect to economic, social, cultural, demographic, environmental, political, governmental and legal aspects, technological forces, Industry's Porter's five force model. Internal analysis of a company profile with respect to seven basic functions of marketing & important financial – ratios, Value chain analysis (VCA) concept

SECTION C

Strategies in Action: Various types of strategies viz. integration strategies, Intensive strategy, Diversification, Turnaround strategies, Divestiture, Outsourcing, Generic Strategies viz Cost leadership, differentiation and focus.

SECTION D

Matrix Analysis & Strategy Evaluation: SWOT analysis, BCG matrix, GE matrix strategic evaluation, Evaluation techniques for strategy and operational control.

Reference Books:

1. Arthur, A, Thomson and Strickland, A, J. (2002), Strategic Management – Concept and cases, Tata McGraw Hill, New Delhi
2. Glueck, W.T. and Lawrence, R. Jauch (2003), Business Policy and Strategic Management, Frank Bros & Co
3. Kazmi Azhar, Business Policy and Strategic Management, Tata McGraw Hill, New Delhi, 2004

Course Title/ Code	Law Relating to Intellectual Property Rights (LWS325)
Course Type:	Elective
Course Nature:	Soft
L-T-P-O Structure	(2-0-0-0)
Objectives	The objective of this paper is to orient students to legal studies. The paper focuses on generally about law and legal system.

Syllabus	Section	Weightage
	A	25%
	B	25%
	C	25%
	D	25%

Section A

Introduction to IPRs and Trademark and Trade Secrets (Contact Hours 4)

- a. Introduction to various types of IPR Laws
- b. Protection of Trademarks under Trademarks Act – Basic legal Framework
- c. Trade Secrets and protection thereof

Section B

Protection of Copyright, Traditional Knowledge, Design and Integrated Circuits (Contact hours 4)

- a. Legal Framework relating to Copyright protection in India
- b. Protection of Industrial Designs under Designs Act
- c. Protection of integrated circuits

Section C

Law relating to Patents (Contact Hours - 4)

- a. Legal Framework for registration and protection of patents and related rights

Section D

IT Law and Cyber Offences and other IPRs (Contact Hours – 4)

1. Introduction to Information Technology Act, 2002
2. Cyber Offences
3. Geographical Indicators and PPVFR

Tutorial activities 1 Hr/Week

- a. Statutes and Case Laws
- b. Case studies from India and abroad

Course Title/Code	Applied Philosophy (EDS 288)
Course Type	Core
Course Nature	Soft
L-T-P-O Structure	(1-0-2-0)
Objectives	<ul style="list-style-type: none"> ● To acquire the basic understanding of the key concepts of philosophy with reference to its applied nature. ● To critically analyze the philosophy of influential philosophers about the different aspects of human life. ● To gain an insight into the philosophical perspectives of socio-political scenario in India. ● To reflect upon philosophy of religion in light of India’s secular status.

Section A: Introduction to Philosophy

- Philosophy: Meaning, Nature and Scope
- Practical uses of Philosophy
- Branches of Philosophy

Section B: Thoughts of Philosophers and their implications

- General Philosophy of John Dewey, Swami Vivekananda and Rabindra Nath Tagore
- Philosophy of life and success: Steve Jobs, N.R. Narayana Murthi, Dr. A.P.J. Abdul Kalam and Muhammad Yunus
- Philosophy of Science and technology- Francis Bacon and Martin Heidegger.

Section C: Philosophical perspectives of Socio-Political scenario in India

- Nature of Democracy and its implications.
- Meaning and requirements of National Integration
- Universal Human Rights

Section D: Philosophical perspectives of Religious scenario in India

- Secularism—its nature and implications, Moral Philosophy of religion with special reference to Hinduism, Jainism, Buddhism, Islam, Christianity, Sikhism.
- Religious pluralism and Religious tolerance

Practical Activities

- A report on ‘my philosophy of life’ from the perspective of a young adult.
- Making a list of videos related to motivating philosophies.
- Interactive sessions on various philosophical perspectives of contemporary philosophers.(Sandeep Maheshwari, Brahmakumaris etc.)
- Readings by students from A.P.J. Abdul Kalam’s book ‘ Forge your future’ (or any other suitable book)
- Organization of and participation in street plays /dramas/ declamation/ debates/ any other suitable activity on any theme of Philosophical perspectives of Socio-Political scenario in India.
- Group discussions on any suitable topics concerning contemporary society like obstacles in national integration, misuse of democracy, implications of secularism etc. and to reflect upon different viewpoints.
- Preparation of quotation boards to display quotes of great philosophers in the college premises.
- Extempore on social dilemmas with respect to obstacles of democracy and national integration to have philosophical views of students.
- Discussion on Article ‘ Rabindranath Tagore’s Educational Ideas and Experiments’ by Christine Kupfer and reflection by students.
- Any other suitable activity.

REFERENCE BOOKS

- Agarwal, D.P. 2000. Ancient Metal Technology and Archaeology of South Asia. New Delhi: Aryan Books International.
- Biswas, Arun Kumar. 1994. Minerals and Metals in Ancient India. Vol. 1 Archaeological Evidence. New Delhi: D. K. Printworld (P) Ltd.
- Dilip K. Chakrabarti. The Early use of Iron in India. 1992. New Delhi: The Oxford University Press.
- Chakrabarti D.K. (1996a). Copper and its Alloys in Ancient India. Delhi: Munshiram Manoharlal Publishers Private Limited
- Mukherjee, M. 1978 Metal craftsmen of India, Calcutta
- Rakesh Tewari, 2003, The origins of iron-working in India: new evidence from the Central Ganga Plain and the Eastern Vindhyas
- Srinivasan, Sharda and Srinivasa Rangnathan. 2004. India's Legendary Wootz Steel. Bangalore: Tata Steel.
- Tripathi, Vibha (Ed.). 1998. Archaeometallurgy in India. Delhi: Sharada Publishing House.
- Tripathi, Vibha. 2001. The Age of Iron in India. New Delhi: Aryan Books International.
- Chatterjee, Satischandra. 2007. An introduction to Indian philosophy.
- Michaels, Axel (2004). Hinduism: Past and Present. New York: Princeton University Press.
- Radhakrishnan, S (1929). Indian Philosophy, Volume 1. Muirhead library of philosophy (2nd ed.). London: George Allen and Unwin Ltd.
- Radhakrishnan, S.; Moore, CA (1967). A Sourcebook in Indian Philosophy. Princeton.

ManavRachna University

ManavRachna Centre for Peace and Sustainability

Course on “Essentials of Peace and Sustainability”

Course Load Structure (L=2, P=2) No of credit =3

(No of contact hours per week 4)

Course Objective

To make participants understand the philosophical underpinnings of “Peace” at Self, Society, Nation and Global level. The course aims at sensitizing participants on aspects of building and maintaining Peace in World through Sustainable Development and creating a mindset to acknowledge the importance of Peace through Collaborative and sustained efforts in personal,

social, economic and governance. The course develops sound concepts which participants are made to apply through a series of Projects, Assignments, Group Work and Seminars and helps participants' growth into "Ambassadors of World Peace as Digital Professionals and sensitive Global Social beings".

Course Structure (Overall Outline)

Blended mode:

- **Online mode: 30%**
- **Classroom work: 30%**
- **Field work:40%**

Course 1: Essentials of Peace and Sustainability

Learning outcomes

After completing this course, the students will be able to

1. Comprehend concept of "Peace and sustainability" and inter linkages
2. Discuss relevance of sustainable development goals to attain Peace
3. Recognize how peace addresses sustainable development goals
4. Construct thoughts and philosophies of Peace Advocacies
5. Compare various Perspectives on Peace
6. Be able to Choose appropriate strategy to face challenges to peace
7. Appreciate different kinds of thoughts in different contexts with reference to peace
8. Summarize understanding of peace based on various perspectives
9. Make decisions in personal, social and professional life aligning to inner peace
10. Envision impact of individual action on society and nation and globe as a whole
11. Develop culture of following netiquettes of a peace loving citizen in digital era
12. Understand the political, economic, socio-cultural conflict & ecological conflict

Unit 1: Basic understanding of Peace and Sustainability

- i. Concept of Peace and Approaches to Peace
- ii. Understanding peace from different perspective: Self, Local Community, National and Global.
- iii. Concept of Sustainability and Sustainable Development Goals (2030) as drivers of sustainable, health and social initiatives
- iv. Why Sustainability

Assignment:

- Document analysis of Sustainable development goals agenda
- Creative expression based on sustainable development goals

Unit 2:

i. Understanding thoughts on Peace

- a) Study of relevant extracts from the writings of Indian thinkers: Gandhi, Tagore, Sri Aurobindo, Vivekananda
- b) Western thinkers: Russell, Iqbal, Dalai Lama, Nelson Mandela
(Please follow Annexure A-reading references)

Assignment:

- *Panel discussion by students*
- *Discussion forums on different aspects of Peace*

Unit 3: Understanding challenges to peace

- i. Challenges to peace-stress, conflicts, crimes, terrorism, violence and wars
- ii. Ongoing conflicts in the political, economic, socio-cultural and ecological sphere at national and international level
- iii. Impact of media- The use of perspective, symbols, stereotypes, and rhetoric in analyzing communication and representation of contentious issues in television and other modern media.

Assignment:

- Case study analysis

Unit 4: Peaceful and Sustainability conscious individual

Being “Peace Ambassador”

- i. Role of self in reducing prejudices, biases and stereotypes, nurturing positivity, making choices in response to crises in personal, social and professional life
(These topics should be covered through games and activities)
- ✓ Developing Core competencies and life skills: Negotiation Rational thinking, System thinking, conflict resolution
(These topics should be covered through workshops)
Cultivating the skills necessary for peace: Introspection and reflective thinking, Mediation, Dialogue
(These topics should be covered through experiential learning through training and practices)

Assignment

- *Reflective journaling*

Being Sustainability conscious individual

- ✓ 3As of Sustainable development goals oriented initiatives: Awareness, Appreciation, Action
- ✓ Power of One
- ✓ Role of Organizations, NGO and Government

- ✓ Role of technology –Digital literacy and media literacy

Assignment

- Project -Students will choose one of the sustainable development goals. Decide the initiative to achieve the goal, execute the initiative. Write a summary report on it and present in symposium.

Some of the suggested areas (But not limited to)

- ✓ *Gender stereotyping*
- ✓ *Gender equality*
- ✓ *Quality education*
- ✓ *Carbon footprints*
- ✓ *Ecological footprints*
- ✓ *Water crisis*
- ✓ *Waste water management*
- ✓ *Climate change*
- ✓ *Biodiversity*

Annexure A: Reading material

- ✓ Mahatma Gandhi (Brute Force and Passive resistance)
- ✓ https://www.mkgandhi.org/hindswaraj/chap16_bruteforce.htm
- ✓ https://www.mkgandhi.org/hindswaraj/chap17_passiveresistance.htm

- ✓ Tagore (‘Civilization and Progress’ and ‘Nationalism in India’)
- <http://tagoreweb.in/Render/ShowContent.aspx?ct=Essays&bi=72EE92F5-BE50-40D7-8E6E-0F7410664DA3&ti=72EE92F5-BE50-4A47-2E6E-0F7410664DA3>
- <http://www.swaraj.org/tagorecivilization.htm>

- ✓ Sri Aurobindo (‘The Ideal of Human Unity’)
- <http://www.collectedworksofsriurobindo.com/index.php/readbook/03-the-turn-towards-unity-its-necessity-and-dangers-vol-the-ideal-of-human-unity>

- ✓ Russell (‘Knowledge and Wisdom’)
- <https://russell-j.com/1073-KW.HTM>

- ✓ Iqbal (‘Is Religion Possible’)
- <http://www.allamaiqbal.com/works/prose/english/reconstruction/07.htm>

- ✓ Dalai Lama (‘Universal Responsibility’)
- <https://www.lamayeshe.com/article/global-community-and-need-universal-responsibility>

- ✓ Nelson Mandela (‘Alternative politics truth and reconciliation’)
- http://www.africa.upenn.edu/Govern_Political/Mandel_100.html

- ✓ Work of Swami Vivekananda
- ✓ Sustainable development goals
 - <https://sustainabledevelopment.un.org/sdgs>
 - <https://www.un.org/sustainabledevelopment/peace-justice/>
- ✓ Sustainable development goals in action by countries, groups and individuals
 - <https://undg.org/wp-content/uploads/2016/12/SDGs-are-Coming-to-Life-UNDG-1.pdf>
 - <https://www.un.org/sustainabledevelopment/be-the-change/>
 - <https://sdgsinaction.com/>
 - <https://sustainabledevelopment.un.org/partnerships/goodpractices>

Course Title/ Code	Website Designing (CSW351B)
Course Type:	Core(Departmental)
Course Nature:	Workshop
L-T-P-O Structure	(0-0-3-0)
Objectives	Student will be able to design a website.

Syllabus	Sections	Weightage
	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

Section-A

INTRODUCTORY CONCEPTS: Internet, Intranet, Extranet, Web Browser and WWW, W3C, HTTP, Cookies, Session, IP Address, Domain Name, Web Server, website and webpage structure. Markup Language, HTML editor: Dreamweaver, Introduction to HTML tags: html, head, body, div, br, hr, p, text formatting, text styles, layouts, marquee, lists: ordered, unordered and definition lists, hyperlinks: http/https/ftp, images, images as hyperlinks, adding graphics, audio and video, table, Frames, iframes, color names, values & shades, HTML entities, symbols, charset, Forms.

Section-B

Intro HTML 5.0: What Is HTML5, History: A Little Retrospective, The WHATWG, Vision and Philosophy behind HTML5, HTML vs HTML5, Getting Started with HTML5: The State Of Browser Support, Structure of a Web Page: HTML5 DOCTYPE, Page Encoding, HTML5 Markup, New And Updated Elements, Structural Elements, New Attributes, Deprecated Elements And Attributes.

Section-C

HTML 5.0 Form, Graphics & Media: HTML5 DOM, Form: new input types & attributes, form validation, HTML canvas and SVG: Drawing shapes, Text & images, working with pixels, Embedding media: Audio and Video based On Plug-in, New Audio/Video Markup, Attributes and Methods, Audio/Video Events & Controls, Plug-ins in HTML inserting YouTube videos.

Section-D

CSS & CSS3: Introduction to CSS, Syntax, Selectors, Pseudo classes, Applying CSS to backgrounds, Text, Fonts, Links, Lists, Tables, Box Model: Border, Margin, Padding, Dimension, Display, Positioning, Align, CSS to Images and image Opacity, CSS Media Types, CSS Attr Selectors.

CSS3: Introduction, Rounded Corners, Border Images, Backgrounds, Colors, Gradients, Shadows, Fonts and text effects, 2D transforms, 3D Transforms, Transitions & Animations.

LIST OF EXPERIMENTS:

- HTML: Basic Tags
 - HTML: Graphics & Tables
 - HTML: Frames & Forms
 - HTML5.0: Basic Tags
 - HTML5.0: DOM & Forms
 - HTML: Canvas & SVG
 - HTML: Media
 - HTML: API's
- CSS

Minor Project

Text Books:

- Pro HTML5 and CSS3 Design Patterns Paperback – 2012 by Dionysios Synodinos, Michael Bowers, Victor Sumner
- Murach's HTML5 and CSS3 Paperback – 2012 by [Zak Ruvalcaba](#)
- Dive into HTML5 by Mark Pilgrim.

Reference Book:

- Hello! HTML5 & CSS3: A user-friendly reference guide Paperback by [Rob Crowther](#).
- HTML5 Guidelines for Web Developers by Klaus Förster.

Course Title/Code	LOGISTICS AND INTERNATIONAL SUPPLY CHAIN MANAGEMENT/MCH313B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	To familiarize the students with the essential elements of the Logistics and Supply Chain Management. Strategic issues in the International Supply Chain Management and logistics network. Configuration along with performance measurement and evaluation shall be studied thoroughly.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Logistics and Supply Chain Management - Concepts, Objectives and functions of Supply Chain

Management, Issues in Supply Chain Management; Managing networks and relationships; Sourcing Internationally, International Distribution Management: Types of Intermediaries, Channel Selection and Management.

SECTION B

Strategic issues in Supply Chain – Strategic Partnership, Logistics Management: Concept, Objective and Scope, Transportation, Warehousing, Inventory Management, Packing and Unitization, Control and Communication, Role of Information Technology in Logistics, Logistics

Service Firms, Third Party Logistics, 4PL(Fourth Party Logistics), Reverse Logistics.

SECTION C

Logistics Network Design for Global Operations Global Logistics Network Configuration, Orienting International Facilities: Considerations and Framework, Trade-offs Associated with each Approach, Mapping the different Approaches, Capacity Expansion Issues; Information Management for Global Logistics: Characteristics of Logistics Information and Telecommunication Systems, Capabilities and Limitations.

SECTION D

Performance Measurement and Evaluation in Global Logistics: Operations and Logistics Control:

Key Activities Performance Information, Measuring Performance in Functional Integration, Measuring Performance in Sectoral Integration, Supply chain operations reference model (SCOR) Model. Global Supply Chains and their societal, business, and cultural contexts and impacts. Perspectives for business, social science, engineering, and legal environment, Drivers for economic globalization (labour costs, resources, regulation etc.), Influence on world and national economies

References:

1. Rushton, A., Croucher, P. and Peter Baker. Handbook of Logistics and Distribution Management. Kogan Page Pub
2. Chopra Sunil and Peter Meindl. Supply Chain Management. Pearson Education
3. Bowersox, D. J., David, J and Cooper. Supply Chain Logistics Management. McGraw Hill
4. Heizer, Jay; Render, Barry. Operations management. Sustainability and supply chain management. Pearson Publication, India
5. Sahay, B S. Supply chain management for global competitiveness. Delhi: Macmillan Publishers India Limited. (Latest Edition may be used)

Course Title/Code	PURCHASING AND INVENTORY MANAGEMENT/MCH314B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	To get the students acquainted with concepts and application of the purchasing and inventory management. To acquaint students with the need and management of inventory in the supply chain management.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Purchasing Management: Objectives and Functions of Purchasing Department, Purchase Policy and Procedure, Negotiations, Purchase of High Capital Equipment and their Feasibilities. Supply Chain Management, Implementation of Supply Chain Principles within a Company.

SECTION B

Suppliers Selection, Vendor Rating and Vendor Rating Techniques, Vendors Development and Vendors'

Relationship management. Inventory Management: Different Costs of Inventory, Optimal Order Quantity, EOQ, Inventory Models with Purchase Discounts, Buffer Stocks, Fixed Order Period Model, Safety Stocks, Optimum Level of Safety Stock.

SECTION C

Inventory Control, Elements of Effective Inventory Control, Advantages, Procedure for Setting up an Efficient

Inventory Control System, V.E.D. Analysis, S.D.E. Classification, F.S.N. Analysis, X.Y.Z. Analysis, Logistics

Management and Its Link with Inventory Control and other Areas.

Value Analysis: Purchasing Research, Price Forecasting, Forward Buying, Make or Buy Decision.

SECTION D

Stores Management: Purpose of Store Management, Location and Layout, Cost Aspects and Productivity, Problems and Developments, New Developments in Storing.

Evaluation of Materials Management: Organization, Difficulties, Process and Criteria, Reporting and Purchasing. Computers in Material Management Electronic Computer, Integrated Computer System for Materials Management, Material Planning.

References:

1. Ansari A and Murderess B., JIT Purchasing, Free Press.
2. Baily P. et al, Purchasing Principles and Management. Pitman.
3. Burt, David N., Proactive Procurement, Englewood Cliffs, Prentice Hall Inc.
4. Dobler, D W. et al, Purchasing and Materials Management,. McGraw Hill.
5. Dutta, A K., Integrated Materials Management, PHI Learning.
6. Farrington B and Waters, Derek W., Managing Purchasing, Chapman & Hall.
7. Gopalakrishnan P and Sunderashan M., Handbook of Materials Management, PHI

Course Title/Code	SERVICE OPERATIONS MANAGEMENT/MCH315B
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The objective of this course is to acquaint the participants with decision making in planning, design, delivery, quality, and maintenance and scheduling of service operations on a global basis. The participants are also expected to appreciate the role of service quality and supply chain in emerging service economy of India in relation to international business. Environment and global benchmarks.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Matrix of Service Characteristics; Taxonomy of services, Challenges in Operations Management of Services, Aggregate Capacity Planning for Services; Facility Location; subjective and objective factors.

SECTION B

Service design and delivery systems; layouts in services, Job and Work Design in Services- Safety and Physical Environment; Effect of Managing queues, Automation; Operations standards and Work measurement.

SECTION C

Determinants of Quality in Services,; Concept of a Total Quality Service, Dynamics of Service Delivery System Measurement, control and improvement of Quality of Services

SECTION D

Scheduling for Service operations, personnel and vehicles, Supply Chain and Distribution of Services, Maintainability and Reliability in Services; Total Productive Maintenance (TPM) in Services.

References:

1. Bowen, D. E., Chase, R. B., & Cummings, T. G. (Eds.). (1990). Services management effectiveness (2nd ed.). San Francisco: Jossey Bass.
2. Fitzsimmons, J. A., & Fitzsimmons, M. J. (2004). Service management (4th ed.). New Delhi: McGraw Hill.
3. Haksever, C., Render, B., Russell, R. S., & Murdick, R. G. (2003). Service management and operations, (2nd ed.). New Jersey: Prentice Hall.
4. Heskett, J. L., Sasser, W. E., & Hart, C.W.L. (1990). Service breakthroughs: changing the rules of the game. New York: Free Press.
5. Martin, C. (1998). Logistics and SCM: Strategies for reducing cost and improving service. New Delhi: Pearson Education.

Course Title/Code	PROFESSIONAL DEVELOPMENT PROGRAMME V /CDC305B
Course Type:	CORE (CDC)
Course Nature:	SOFT
L-T-P-O Structure	1-0-1-0
Course Objectives	CO1:to give students the exposure to 21 st century skills CO2:to understand the interview process CO3:to create and deliver presentations confidently with effective use of body language CO4:to understand how to be professional CO5:to improve writing as well as speaking skills of students

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Social Responsibility: CSR Initiatives of various companies, Why CSR.

SECTION B

21st Century Skills: Creativity, Change Management, Stress Management, Cross Cultural Communication, Team Building

SECTION C

Written and Speaking Skills: Email Writing, Cover Letter, Creating and delivering Presentations, Group Discussions

SECTION D

Interviews: Resume Writing, Researching the employer, Power Dressing, Managing Interviews

References:

1. Presenting to Win: The Art of Telling Your Story
Book by Jerry Weissman
2. 21st Century Skills: Learning for Life in Our Times
Book by Bernie Trilling and Charles Fadel
3. Everybody Writes: Your Go-To Guide to Creating Ridiculously Good Content
By Ann Handley

SEMESTER VI

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NAME (Hard/Soft/Workshop/Optional/CC)	COURSE TYPE (Core/Elective/University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH318 B	BUSINESS ANALYTICS	DM C	HA RD	CORE	3	0	0	0	3	3
MCH316 B	E-COMMERCE	DM C	HA RD	CORE	3	0	0	0	3	3
MCH317 B	DIGITAL MARKETING	DM C	HA RD	CORE	3	0	0	0	3	3
MCH331 B	INTRODUCTION TO SHIPPING	DM C	HA RD	ELECTIVE	3	0	0	0	3	3
MCH332 B	MULTIMODAL TRANSPORTATION	DM C	HA RD	ELECTIVE	3	0	0	0	3	3
MCH333 B	TRANSPORTATION AND DISTRIBUTION MANAGEMENT	DM C	HA RD	ELECTIVE	3	0	0	0	3	3
MCH334 B	APPLIED OPERATIONS MANAGEMENT PROJECT	DM C	NTC C	ELECTIVE	0	0	0	8		8
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					18	0	0	8	18	26

Course Title/Code	DIGITAL MARKETING/MCH317B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>By the end of the course, a student should be able to:</p> <p>CO1:Understand the scope of digital marketing and how it integrates with overall business and marketing strategy globally</p> <p>CO2:Assess various digital channels and understand which are most suitable to an idea or solution</p> <p>CO3:Understand the fundamentals of a digital marketing campaign, and be able to apply it to achieve your business objectives</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction , Digital Marketing meaning, scope and Importance, Web marketing strategy , Web marketing environment, Web Content, Web marketing tools

SECTION B

Online Buyer Behavior, Website Design, Online user experience, online site design, Integrated Internet Marketing Communications, Interactive Marketing Communication, Search Engine Optimization, Creating and Managing Campaigns

SECTION C

Digital Promotion Techniques: EMail marketing, Permission Marketing, Viral Marketing, Social Media Marketing, Content Marketing, Facebook Advertising, Visual Advertising, Display Advertising, Mobile Advertising, Image Advertising, Video Advertising; YouTube Advertising, Concept of SNS Industry (Social Networking Site Industry)

SECTION D

Google Analytics, Tracking Performance, Tracking Mobile marketing Performance, Web Analytics, Traffic Reports, Behavior reports, KPIs in analytics, Tracking SMM performance

References:

1. Ryan Damian, Understanding Digital Marketing, Kogan Page.
2. Parkin Godfrey, Digital Marketing: Strategies for Online Success, New Holland Publishers.
3. Hanson, W. and Kalyanam, E-Commerce and Web Marketing, Cengage

Course Title/Code	BUSINESS ANALYTICS MCH318B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	<p>By the end of the course, a student should be able to:</p> <p>CO1:Understand the fundamentals of business analytics and articulate a business problem and convert it into a viable Analytics question</p> <p>CO2:Apply Data visualization for exploratory analysis and communicate effectively to diverse audience.</p> <p>CO3:Concept of Big Data and, how it can be aligned with business objectives.</p> <p>CO4:Understand the fundamentals of Data Science, Machine Learning and Artificial Intelligence in the growing digitalization at the global level</p> <p>CO5:Analyze Data and find patterns in them for better decision making</p> <p>CO6:Apply various analytics techniques in problem solving</p> <p>CO7:Apply knowledge and develop solutions across a range of functional areas like Marketing Finance, HR and Operations.</p>

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Foundations of Analytics: Introduction of Business Analytics, its evolution, Scope & Usage in Business. Popular tools used for Analytics. Data & Information - Types of data, Data Dashboards and reporting, Data Visualization, Big data & its importance, Big Data Technology - Hadoop, Industry examples of Big Data.

SECTION B

Data preparation (Treatment of missing values, Identification of outliers and Erroneous data), Data selection, classification & reduction. Measures of Location, Measures of Dispersion, Measures of Shape, Measures of Association, Confidence Intervals, Statistical Inferences, Data Warehouse, Business Intelligence, Data Mining

SECTION C

Analysis of variance (ANOVA), chi square test, regression – simple vs. multiple linear regressions, concept of multicollinearity, difference between correlation and regression, data science, machine learning and artificial intelligence.

SECTION D

Time series analytics and forecasting, Application of Analytics: Retail, Marketing, Finance, HR & Web analytics

Tools: Python, R, Excel, SPSS

Text Books:

1. Camm, J.D. et al. (2015) . Essentials of Business Analytics. Cengage Learning
2. Evans, J.R. (2017). Business Analytics. Pearson Publishing
3. Minelli, M.et al. (2014). Big Data, Big Analytics. John Wiley & Sons.
4. Turban E, Armson, JE, Liang, TP & Sharda (2007). Decision support and Business Intelligence Systems, 8th Edition, John Wiley & Sons.
5. Michael J. A. Berry and Gordon S. Linoff (2004). Data Mining Techniques for marketing, Sales and CRM, John Wiley & Sons.
6. Business Analytics: The Science of Data - Driven Decision by U Dinesh Kumar

7. Fundamentals of Business Analytics” by R N Prasad and Seema Acharya

Reference Books

1. Albright, S. C and Winston, W. L (2015). “ Business Analytics: Data Analysis and Decision Making”. Atlantic Publisher and Distributors.
2. Business Analytics: Applications To Consumer Marketing” by Sandhya Kuruganti and Hindol Basu
3. Data science for Business” by Foster Provost
4. Business Analytics: Concepts and Theories” by Chopra B

Course Title/Code	E-COMMERCE/MCH316B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	This course presents to enable the student to become competent to understand the mechanism for excelling in e commerce based employments and self-employment opportunities

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Network Infrastructure [6L] Client/Server Computing, N-tier Solution, Internet hierarchy, Basic Blocks of E-Commerce, Network layers and TCP/IP protocols, HTTPS, Types of Services and Servers, Virtual Private Network (VPN), Remote Connectivity. Introduction to E-commerce [8L] Concept of EDI & FDI,

SECTION B

Introduction to E-commerce, E-Commerce & E-Business, Features of Ecommerce, E-Commerce payment mechanism, E-Commerce revenue streams, Advertising and Promotion, Building an E-commerce website, Customer Service and service quality evaluation (SERVQUAL)

SECTION C

E-Business Models [8L] Business to Consumer (B2C), Business to business (B2B), Consumer to consumer (C2C), Peer to peer (P2P), M commerce Business Models, E-Governance.

SECTION D

Security and Legal Issues [8L] Cyber Fraud and solutions, Online Contracts, Digital Signatures, Digital Certificates, Concept of Encryption and Cryptography, Public and Secret key encryption, IT Act to legalize E-commerce, Taxation in relation to E-Commerce, Consumer Protection in Cyberspace.

Practical: [20L] Web site development & programming

References:

1. E-Commerce, 4th Edition, Business, Technology, Society, By Kenneth C. Laudon, Carol G. Traver, SPD
2. E-Commerce, K.K. Bajaj, Debjani Nag, TMH India
3. e-Business & e-Commerce for Managers, By Harvey M. Deitel, Paul J. Deitel, Kate Steinbuhler, SPD
4. E-Commerce: An Indian Perspective, S. J. Joseph, P. T., PHI
5. The Information Technology Act, Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd.

Course Title/Code	TRANSPORTATION AND DISTRIBUTION MANAGEMENT/ MCH333B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Understand the concept and application of transportation and distribution management. To understand role of distributors – designing various distribution channels .networking the role of transportation. Will effectively be able to manage transportations.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction - role of distribution in supply chain – transportation management – warehousing concepts – designing distribution channels – understanding distribution costs Advantages of distribution models – disadvantages of distribution models – prerequisites Of distribution – comparing distribution networks. Transportation management. Meaning and Definition -Role of transportation and distribution in Supply chain and logistics management – Importance of an effective transportation system - Characteristics of transportation modes and selection – General criteria for carrier selection – Basics modes of transportation – Transport documentation - Transport economics and pricing –Costing of transportation services.

SECTION B

Distribution network planning – various factors in distribution - delivery lead time and local facilities – optimization approach and techniques – material management process – role of transportation – transportation principles and participants – contribution of various agencies in transportation. International Air transportation – Types of aircrafts – Air cargo Regulations – Truck and Rail Transportation – Inter model – pipe lines – Packaging objectives – TCL,LCC – Refrigerator – goods – customs duty – Non Traffic barriers – customs cleaning process – International logistics Infrastructure-Transportation Selection – Tradeoff – modes of transportation – models for transportation and distribution.

SECTION C

Transportation modes – performance characteristics and selection – various modes of transportation (multimodal) – merits of each all modes of transportation – transportation performance costs and value measures – understanding – comparing – cost components of multimodal transportation. - Transportation routing decisions – transportation administration – transportation operations management – consolidation of freight – cost negotiations – Transportation management strategy – TMS transportation management system – Transportation services

SECTION D

Transportation cost consideration – transportation rate profiles - various trends in transportation – application of IT in transportation – E commerce Intelligent transport management systems. Transit operation software – geographic information systems – advanced fleet management systems – intermodal freight technology – transportation security initiatives And role of technology – various inspection systems.

References:

1. Management of Modern City Transportation System, M Mustafa K KDewan, Deep & Deep

2. Sunil chopra and P Meindl , supply chain management strategy .
3. Transportation Management – Imperatives and Best Practices, S. Jaya Krishna, ICFAI University Press, 2007.
4. Marine Transportation Management, Henry S. Marcus, Auburn House Pub. Co.,1986.

Course Title/Code	MULTIMODAL TRANSPORTATION/MCH332B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Understand the concept and application of multimodal transportation

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to Multimodal Transport . Carriage By Air . Carriage By Sea . Carriage By Road . Carriage By Rail . Types of Vessels . Operators (Vessel and other) . Freight Forwarders and NVOCC . Outsourcing of Logistics Services . Overview of MMTG Act (1993) 11. Shipping Intermediaries and Formalities. Container – types. Different types of cargo . Packaging and Material Handling. Introduction to Travel Demand Management, TDM Strategies. Multimodal transport operator.

SECTION B

Case Studies on TDM strategies, Introduction to Public Transport System(PTS). Introduction to Public Transport System(PTS), Public Transport Operations. International transport conventions: UN Transport Conventions • Driving license • Registration • Insurance • Food safety • Exempt of Taxes – import duties . Multilateral transport agreements. Convention on Road Traffic . TIR procedures. CMR Convention. Importance of international conventions. International conventions and globalization

SECTION C

PTS Planning consideration, PTS Case Studies.Introduction to NMT (non motorized transport) systems, Assessment of NMTs .Week 8: Planning considerations for Pedestrians, Planning Considerations for Bicyclists.Planning Considerations for Bicyclists, NMT Strategies

SECTION D

Introduction to Intelligent Transportation Systems, Introduction to ITS, Telecommunications in ITS . Components of ITS Architecture, ITS Architecture, ITS functional areas, ITS Operations, ITS Applications .Case studies. Smart cities and their transport systems. Transport and mobility technologies

References :

1. A Textbook on Container & Multimodal Transport Management: by Hariharan
2. Management & Operation Of Container Terminals & Multi-Modal Transport Logistics by Capt. Ramesh G. Khare
3. Logistics and Multi-Modal Transport by by Tony Mason
4. Logistics and Multi-Modal Transport by by Institute of Chartered Shipbrokers
5. Multimodal Transport Systems by by Slim Hammadi and Mekki Ksouri

Course Title/Code	INTRODUCTION TO SHIPPING/ MCH331B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Prerequisites	Nil
Course Objectives	Understand the concept and application of shipping as transportation method

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOTAL	100%

SECTION A

Introduction to shipping. Shipping company structure. Organization of a shipping company – Roles of Commercial, Technical & Crewing departments – In house vs outsourcing of Ship Management functions – Ship Registries, National vs Open Registries – Ship Classification societies. The Indian Bills of Lading Act 1856 – The Indian Carriage of Goods by Sea Act 1925 – The Indian Lighthouses Act 1927 – The Inland Steam Vessels Act – The Indian Port Health Rules. Maritime and Possessory liens – claim's; order of priorities; subjects maritime liens ; arrest and jurisdiction.

SECTION B

Introduction- Types Of Ships For The Trade; Major Cargoes; Producing Areas And Trades, Their Movement; Methods Of Cargo Handling For Dry Cargo And Tankers. Chartering Market- Different Players, Sale Agreements, FOB,CIF; Factors Influencing Supply And Demand; Role Of Brokers; Baltic Exchange, Various Freight Indices And BIFFEX. Sales and purchase of secondhand ships – Financing of secondhand ships – Analysis of standard Ship Sale and Purchase contracts – Role of ship sale brokers – Demolition market dynamics

SECTION C

History of IMO, Membership in IMO, Legal instruments – SOLAS, COLREG, PSC, Governing bodies in IMO, Technical Committee, Marine safety Committee, standards and recommendations for safety Investigation in Marine casualty. Maritime issues: Piracy and Maritime security, continental shelf, Boundaries, Fisheries, Coastal states vs Maritime states, Marine protected areas, Regional approach, Marine Pollution.

SECTION D

Environmental issues connected with Ports & Terminals – Health & safety issues – Port Security issues – International Ships & Port facility security (ISPS) code. Role of Agents. Ship Agents and E-commerce – Information flow through Ship Agents – Electronic Data Interchange – Use of Internet, Access to Principals Systems for conducting Day to Day Work – Use of electronic systems namely Bolero, Liner Portals. International Freight Forwarding – Logistics Service Providers – Project Cargo Forwarding – Multimodal operations – Warehousing Operations

References:

1. Carting practice (Analysis of C/Ps) – J. Bes, 1st Ed. 1960 (Barker)
2. Ocean Freight & Chartering – C.F.H. Cufly, 1st Ed. 1970 (Crossby)
3. Chartering Documents – H. Williams, 3rd Ed. 1996 (LLP).
4. Shipping & Chartering Practice – Gorton, 1st Ed. etc. 4th Ed. 1995 (LLP) Bes' Chartering & Shipping Terms – N.J Lopez, 11th Ed. 1992 (Barker).
5. Ship Management (Business of Shipping) – Malcolm Willingale (4th Edn, LLP Professional Publications 2005)
6. Professional Ship Management – Panayides P (Ashgate Publications 2001)
7. Guidelines on ISM Code – International Shipping Federation (ISF 3rd Edition, New Guidelines 2010)
8. Commercial Management in Shipping – R. Tallack (Nautical Institute)

9. Port State Control – Dr.Z.Ozcayir (2nd Edn,Informa Professional Jun 2004)
10. Start Your Own Freight Brokerage Business - Lynn & Jacquelyn (3rd Edn, Entrepreneur Press)
11. Freight Forwarding & Multimodal Transport Contract – D. Glass (1st Edn, Informa Legal Publishing UK 2004)