MBA SYLLABUS AND COURSE CURRICULUM 2023-25

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
Deemed to be University U/S 3 of the UGC Act, 1956
SCHOOL OF MANAGEMENT

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SCHOOL OF MANAGEMENT

CONTENTS

PROGRAMME EDUCATIONAL OBJECTIVES

1. To build a strong foundation in all the key functional areas of management discipline.
2. To demonstrate the ability to adapt to a rapidly changing environment through lifelong learning in advanced areas of management and related fields.
3. To enhance research acumen to foster growth in industry and society.
4. To adhere to ethical values and standards in promoting sustainable business practices.
5. To develop entrepreneurial spirit in fostering innovative business practices relevant to industry and society.

PROGRAMME OUTCOMES

1. Apply knowledge of management theories and practices to solve business problems.
2. Foster analytical and critical thinking abilities for data-based decision making.
3. Ability to develop value-based leadership.
4. Ability to understand, analyse and communicate global, economic, legal, and ethical aspects of business.
5. Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.

COURSE STRUCTURE OF THE MBA PROGRAMME

Semester wise Core courses and Credits

Semester I

Sl. No.	Course Code	Subject	L	T	P	Total Contact Hours	Credit
1	BM60301	Marketing Management – I	2	0	0	30	2
2	BM62201	Accounting for Managers	1.5	0	0.5	30	2
3	BM60101	Organizational Behaviour	2	0	0	30	2
4	BM60401	Managerial Economics – I	2	0	0	30	2
5	BM60501	Quantitative Techniques – I	2	0	0	30	2
6	BM60601	Information Technology for Managers	2	0	0	30	2
7	BM62701	Business Communication	1.5	0	0.5	30	2
8	BM60703	Legal Aspects of Business	2	0	0	30	2
9	BM62103	Human Resource Management	1.5	0	0.5	30	2
10	BM60801	Production & Operations Management – I	2	0	0	30	2
Semester Total Credits							**20**

Semester II

Sl. No.	Course Code	Subject	L	T	P	Total Contact Hours	Credit
11	BM60302	Marketing Management – II	2	0	0	30	2
12	BM60202	Cost and Management Accounting	2	0	0	30	2
13	BM60402	Managerial Economics – II	2	0	0	30	2
14	BM60204	Corporate Finance – I	2	0	0	30	2

15	BM60102	Organization Theory	2	0	0	30	2
16	BM62802	Production and Operations Management – II	1.5	0	0.5	30	2
17	BM60504	Business Research Methods	2	0	0	30	2
18	BM60502	Quantitative Techniques – II	2	0	0	30	2
19	BM62704	Business Ethics and Corporate Social Responsibility	1.5	0	0.5	30	2
20	BM60506	Business Analytics	2	0	0	30	2
21	YG-1081	Yoga and Human Con sciousness	0	0	1	15	1
Semester Total Credits							**21**
Summer Internship Project (SIP)							**8**

Semester III

Sl. No.	Course Code	Subject	L	T	P	Total Contact Hours	Credit
22	BM62705	Strategic Management	1.5	0	0.5	30	2
The semester will also have 16 credits in 8 elective courses							
Semester Total Credits							**18**

Semester IV

Sl. No.	Course Code	Subject	L	T	P	Total Contact Hours	Credit
There will be no core courses in the semester and 12 credits in 6 elective courses							
Semester Total Credits							**12**
Total Programme Credits - 79							

AREA WISE COURSES AND SYLLABUS

Area: Strategy and General Management

Sl. No.	Course Code	Subject	L	T	P	Credit
Core Courses						
1	BM62703	Legal Aspects of Business	2	0	0	2
2	BM60701	Business Communication	1.5	0	0.5	2
3	BM62704	Business Ethics and Corporate Social Responsibility	1.5	0	0.5	2
4	BM62705	Strategic Management	1.5	0	0.5	2
5	YG-1081	Yoga and Human Consciousness	0	0	1	1
Elective Courses						
1	BM62707	Blockchain Applications in Business	1.5	0	.5	2

Legal Aspects of Business

Subject Code: BM62703

Credit: 2-0-0 2

Prerequisite: Nil

Course Introduction

Business executives have an obligation to create value for their stakeholders, while confirming to basic rules of society, both those embodied in law and those embodied in ethical custom. Law, in one form or another, permeates modern society at all levels of government—local, state, federal, and in limited circumstances, international. Consequently, today's businesspersons and executives benefit by developing a working knowledge of law. In the business world, we may not always know what the substantive law is; but if we can spot the issue (before it becomes a problem), we will be able to raise it within the organization, with outside counsel, to find answers. Businesspersons who are adept at issue-spotting are invaluable to their organizations.

Course Outcomes

At the end of the course, the students will be able to:

CO1: Reflect salient aspects of substantive and procedural law.

CO2: Explain provisions of substantive law and procedural law (law that creates and controls the rights and duties of parties) and procedural law (law that creates and controls the process of enforcing the rights and duties under substantive law) through case examples.

CO3: Develop issue-spotting skills- spot the issue (hopefully before it becomes a problem), to raise it with the appropriate persons within the organization, with outside counsel, or find the answer by self.

CO4: Analyse contexts involving substantive law and procedural law.

CO5: From given case situations, create solution using appropriate provisions of substantive law and procedural law.

CO6: Evaluate given case orders and identify merits/ inconsistencies.

Course Content

- Introduction and overview, scope & subject matter of legal environment.
- Indian contract act, 1872: offer & acceptance; competence of the parties to contract; objects, consideration, contingent & quasi contracts, performance, termination, breach of contracts & remedies; void, voidable, illegal & unlawful agreements; guarantee & indemnity; contract of agency.
- Sale of goods act, 1930: contract of sale, price; conditions, warranties; rights & duties of seller & buyer; rights of an unpaid seller, remedies of breach of contract; auction sale.
- Arbitration & conciliation act, 1996: legal provisions relating to arbitration & business contracts; provisions relating to conciliation,
- Indian companies act 2013: nature, types and characteristics of a company; incorporation of a company; lifting of corporate veil; MOA & AOA; shares & share capital; corporate governance; accounts & audit.
- Negotiable instruments act meaning, nature & types of negotiable instruments; law relating to negotiable instruments; rights & liabilities of paying banker & collecting banker.
- Overview of Consumer Protection Act, 1986
- Overview of Information Technology Act, 2000

Textbook

1. Ravinder Kumar, Legal Aspects of Business, Cengage, 6th, 2023, ISBN: 9789355734204.

Reference Books

1. Daniel Albuquerque, Legal Aspects of Business, Oxford University Press, 2nd Edition, 2017, ISBN - 9780199463169.

Business Communication

Subject Code: BM60701

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Course Introduction

There is growing evidence that effective communication is the key for keeping an enterprise, as a system of individuals, working together for winning in the marketplace. In a volatile, uncertain, complex, and ambiguous world, an organization needs the ability to respond fast. To be able to respond fast, effective communication is of prime importance at any organization today. It supports open interaction with a free flow of information, managing organizational communication processes, and creating an open and adaptive communication system. Accordingly, management graduates are expected to be proficient in written and oral communication.

Course Outcomes

At the end of the course students will be able to:

CO1: Reflect the six fundamentals of effective writing (focus and coherence, organization and structure, development of ideas, voice, word choice, and conventions).

CO2: Explain the six fundamentals of effective writing with suitable examples.

CO3: Apply the six fundamentals of effective writing in business communication.

CO4: Analyse contexts involving typologies of business communication.

CO5: Evaluate given sets of business communication to identify inconsistencies and opportunities for improvement.

CO6: Create business proposals, incident reports, policy documents and project reports.

Course Content

- **Module 1**: An introduction to business communication – the process, and the barriers. Types, channels, directions of Business Communication in an Organizational Communication Network.
- **Module 2**: Oral Communication. Understanding the importance of non-verbal communication; Kinesics, Proxemics, Paralanguage; Other minor components; Active listening; Improving public speaking skills; Designing structured presentations; Using Visual Aids effectively during Business Presentations; and engaging in vibrant business-related conversations.
- **Module 3**: Written Communication – I. Enhancing meeting productivity, preparing an agenda, notifying participants, and writing the minutes.
- **Module 4**: Written Communication – II. Organizing and composing routine, good news, bad news and persuasive messages, writing business letters, writing business reports and proposals, Creating concise memos, circulars and office orders, and Effective Email writing.
- **Module 5**: Written Communication – III. Tailoring the perfect resume as an effective self-marketing tool and Drafting cover letters

Textbook

1. Shalini Verma, Business Communication: Essential Strategies for Twenty-first Century Managers, Vikas Publishing, 2nd Edition, 2014, ISBN – 9789325981171.

Reference Books

1. Courtland L. Bovee John V. Thill, Business Communication Today, Pearson, 15th Edition, 2020, ISBN-13: 9780136713807.

Business Ethics and Corporate Social Responsibility

Subject Code: BM62704

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Course Introduction

Managing ethical issues both within an organization and in relationship to a range of external stakeholders, is important for the purposes of ensuring organizational

integrity, enhancing organizational legitimacy, and managing risk. The concerns for protecting rights of minority, being fair to stakeholders, promoting and protecting common good and virtues, while creating greater good for the greater number has been growing. Increasingly, companies employ ethics and sustainability officers, or managers, to help implement their core values and strategy. In the last few years many companies embraced "sustainability" and begun reporting not just financial performance but social and environmental performance as well. Management graduates are expected to demonstrate awareness of ethical issues, distinguish ethical and unethical behaviours, and resolve ethical dilemmas.

Course Outcomes

At the end of the course students will be able to:

CO1: Define/ state the five approaches to ethics; dimensions/ steps concerning individual & corporate moral development; dimensions of ethics in functional areas of management; and dimensions of CSR and sustainability performance.

CO2: Explain steps to resolve an ethical dilemma; steps for individual and corporate moral development; processes for addressing ethical issues in functional areas of management; processes for accessing sustainability performance and CSR.

CO3: Resolve business level ethical dilemmas as well as dilemmas in functional areas of management.

CO4: From given contexts/ case studies, identify causes (related to ethics) of both explicit and implicit effects.

CO5: Create a "Green Index" for a company.

CO6: Compare your decision with the decision of peers and the protagonist(s) and defend your decision.

Course content

- **Ethical theory and business:** the utilitarian approach; the rights approach; the fairness and justice approach; the common good approach; the virtue approach; spheres of executive responsibility; ethical dilemmas; and a framework for ethical reasoning.
- **Moral development:** individual moral development- moral sensitivity, moral reasoning, moral motivation & moral character); corporate moral development through development of organizational culture- amoral, legalistic, responsive, emerging ethical and ethical organizations.

- **Corporate responsibility:** CSR theories- instrumental theories, political theories, integrative theories and ethical theories; sustainability performance – environment sustainability, economic sustainability and social equity sustainability.
- **Ethics and functional areas of business management:** ethics in human resource management; ethics in marketing management; ethical issues in finance and accounting; ethical issues in productions and operations management; ethical issues in emerging technologies.

Textbook

There is no prescribed textbook for the course.

Reference Books

1. Denis G. Arnold, Tom L. Beauchamp and Norman E. Bowie, Ethical Theory and Business, Cambridge University Press, 10th Edition, 2020, ISBN-1108422977.
2. Linda K. Trevino and Katherine A. Nelson, Managing Business Ethics: Straight Talk about How to Do It Right, Wiley, 8th Edition, 2021, ISBN - 9781119718857

Strategic Management

Subject Code: BM62705

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Course Introduction

Strategy is an integrated set of choices that uniquely positions the firm in its industry to create sustainable advantage and superior value relative to the competition. Every management staff in an organization needs to understand how s/he as an individual, his/ her function, and team contribute to creating superior value. Students will learn several frameworks and models to better understand and analyse the macro-environment, the industry environment, firm level resources and strategy formulation and implementation at functional, single business and multi-business level.

Course Outcomes

At the end of the course students will be able to:

CO1: Recall of specifics & universals, methods & processes, and a pattern structure or setting – Strategic direction, Value-Imitation-Perimeter, Competitive forces, STEP factors, KSF, Key Strengths, Key Weaknesses, Competitive advantage, best products, Total customer solutions, System lock-in, Structure-control-culture.

CO2: Explanation and/or paraphrase concepts concerning the aspects covered in CO1.

CO3: Apply strategy content or process data to structured situations, such as incidents or structured problems and exercises.

CO4: Breakdown given sets of communication into its constituent elements or parts, identify relationships among parts and identify organizational principles based on the given case studies.

CO5: Develop a set of strategic alternatives and a recommend plan of action based on the group project work.

CO6: Evaluate own and others' recommended plans of action in strategic situations based on the given case studies.

Course content

- **Overview and fundamental dimensions of strategy:** Ten schools of thought, five Ps of strategy, why organizations need strategy, creating value, managing imitation and managing perimeter, fundamental dimensions of strategy.
- **Winning aspirations:** Vision, mission, core values, goals and objectives.
- **Where to play:** Product/ service/ solution categories, consumer segments, channels, vertical scope of firms and horizontal scope of firms.
- **Competitor analysis:** Competitors' response profile- current strategy, capabilities, future goals and assumptions.
- **How to win:** best products- cost leadership, differentiation & dual advantage; total customer solutions- redefining customer experience, managing horizontal breadth & customer integration; and system lock-in- restricted access, dominant exchange & managing proprietary standards.
- **Firm's capabilities:** Resources, organisational capabilities; profit earning potential; developing resources & capabilities required capabilities to create and sustain competitive advantage and dynamic capabilities.
- **Strategy implementation:** Systems, structures, and processes required to support firm's positioning choices.

Textbook

No textbook is prescribed for the course.

Reference Books

1. David Dranove, David Besanko, Mark Shanle and, Scott Schaefer, Economics of Strategy, Wiley, 7th, 2017, ISBN: 9781119042310.
2. A. G. Lafley and Roger L. Martin, Playing to Win: How Strategy Really Works, Harvard Business Review Press, Unabridged edition, 2014, ISBN – 1491528796.

Blockchain Applications in Business

Subject Code: BM62707

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Course Introduction

Blockchain is touted as the new internet. It is in the same stage of development and capability of disruption as the internet was in the 1990s. It is a digital platform where information and assets can be shared. It is rapidly changing the way markets and organization's function. As per latest reports released by LinkedIn, 1 out of 10 jobs announced in the blockchain niches posted from India. Blockchain developers, smart contract developers, and blockchain generalists are in high demand. Several conglomerates and leading players across sectors in India have announced large blockchain projects to tackle different use cases. Even the country's Government think tank, NITI Aayog has announced India Chain – an indicator of the immense opportunities for growth in this sector in the nation.

Course Outcomes

At the end of the course students will be able to:

CO1: Reflect on the underlying technology that drive blockchain in business.

CO2: Explain the underlying technology that drive blockchain in business with examples.

CO3: Apply the learnt tools and techniques to share information and assets.

CO4: Analyse business case for use of Blockchain technology

CO5: Use open-source tools to create a blockchain use case.

CO6: Evaluate the Blockchain use case considering best practices.

Course Content

- **Introduction to blockchain:** Evolution of Blockchain, Types of Blockchain
- **Blockchain Technology and frameworks:** Introduction to popular Blockchain technologies, Smart Contracts & DApps, Identity and Anonymity on Blockchain, Governance and Consensus
- **Use cases of blockchain in business applications:** Blockchain and Cryptocurrency (Bitcoin, Ethereum), Blockchain and NFT, Blockchain in Supply Chain and Manufacturing, Blockchain in Fintech, Blockchain in Healthcare, Blockchain in Government and Public Service
- **Hands-on exercises on blockchain,** Hyperledger and Ethereum – concepts and application, Hyperledger Composer

Textbook

No prescribed textbook. Reading materials will be shared by faculty.

Reference Books

1. Don Tapscott and Alex Tapscott; Blockchain Revolution; Portfolio Penguin, 1st Edition, 2016; ISBN: ‍0241237858.
2. Mohsen Attaran and Angappa Gunasekaran; Applications of Blockchain Technology in Business; Springer; 1st Edition; 2019; ISBN – 9783030277987.

Yoga and Human Consciousness

Subject code: YG-1081

Credit: 0-0-1-1

Prerequisite: Nil

Introduction

Good health is key to happiness, peace and success for all persons in general and management professionals in particular. Students in professional academic programs while trying to excel in their respective academic disciplines, have also to prepare for career openings in their respective fields. This requires a balance between excellence and success. In the process of balancing success and excellence,

there may be undue pressure on time unless managed well, resulting in disturbed physical routines and ultimately resulting in poor physical, emotional and spiritual health. The course is aimed at helping students practice yoga to maintain positive physical, mental and spiritual health.

Course Outcomes

CO1: State the sutras yoga

CO2: Explain the sutras with suitable examples.

CO3: Apply the learnt yoga sutras to perform the kriyas.

CO4: Analyze the kriyas performed by a group of practitioners and identify inconsistencies.

CO5: Create a yoga plan for working professionals.

CO6: Evaluate kriyas for effectiveness.

Course Content

Unit-1: Concept and significance of consciousness

Modern and ancient approach of consciousness, Types of consciousness, viz., Jagrata, Svapna, Susupti, Turya, and Turiyatita

Unit-2: Preparatory practices

Breathing practices, Suksma vyayma (all 46 practices), and Sthoola vyayma (all14)

Unit-3: Dharana practices

Principles and procedure of Antaranga & Bahrangatrataka, Jatrutrataka & Jyotitrataka; Antarmouna, Chakrameditation, Cyclicmeditation and Transcendental meditation

Unit-4: Concept and practice of Dhyana

Concept of Jyoti and Bindu dhyana, principle and procedure of Vipassana meditation, Prekshameditation, Transcendental meditation, Brahmakumari Rajayoga meditation and Yoganidra

Reference Books

1. D. Brahmachari, Yogic Sukshma Vyayma, Ind-Us, 1975, ISBN – 0882538020
2. Swami Harsanansda, Mandukya Upanishad, RK Mission Publication

Area: Business Economics

Sl. No.	Course Code	Subject	L	T	P	Credit
Core Courses						
1	BM60401	Managerial Economics – I	2	0	0	2
2	BM60402	Managerial Economics – II	2	0	0	2

Managerial Economics - I

Subject code: BM60401
Credit:2-0-0-2
Prerequisite: Nil

Course Introduction

The course is designed to serve as a foundation of economic decision making that forms the basis of almost all disciplines of management. Decisions taken by individuals, businesses and governments or regulators, and a framework to evaluate those decisions is the subject matter of this course. Different factors underlying the behaviour of firms under various market structures are studied and the resulting market outcomes are tested through case studies. The course also incorporates insights on the impact of asymmetric information and uncertainty on decisions and outcomes. To make the course application-oriented solution of various real-life cases are included in the pedagogy.

Course Outcomes

At the end of the course the students will be able to:

CO1: Learn the role of economic agents and their economic motives, and how the self-interest of these agents leads to the formation of markets.

CO2: Develop a theoretical understanding of economic concepts.

CO3: Apply the theoretical models to study implications for prices and welfare under different market structures.

CO4: Analyse the market outcomes under different market structures.

CO5: Evaluate the role of information and uncertainty in economic decision making.

CO6: Creatively provide solutions to real life problems in business cases.

Course Content

Module 1: How the Economy Works? (Household/ Firms/ Co-operatives/ Government), Economic Decision Making highlighting the three central problems of our economy. Theory of Demand: Consumer Behaviour: Demand-Supply Analysis and Elasticity Analysis and Applications of Elasticity for Demand and Supply; Demand Forecasting.

Module 2: Production theory & Analysis: Dealing with Short run and long run behaviour; Cost Theory & Analysis: Linkage between cost, revenue and output through optimization. Use of Calculus and Derivatives in Cost Analysis.

Module 3: Market Structure & Market Morphology: Price and output determination under Perfect and Imperfect Market in both short run and long run; Pricing Strategies in Markets, Perfect or Fair Competition, & Monopoly (Barriers/ Restrictions/ exclusive rights or ownership).

Module 4: Monopolistic competition: Price & output decision under monopolistic competition. Oligopoly- Perfect & Imperfect Oligopoly, Cartels, Price leadership. Application of game theory to determine optimal outcome under oligopoly market.

Module 5: Market Imperfections: Market failure, Imperfect & Asymmetric information; & Decision under uncertainty.

Textbook

Paul G. Keat, Philip Young, Stephen Erfle and Sreejata Banerjee, Managerial Economics, Pearson, 7th Edition, 2018, ISBN 9789386873286.

Reference Books

1. Richard Lipsey and Alec Chrystal, Economics, Oxford University Press, 14th International Edition, 2022, ISBN: 9780198791034.
2. Dominick Salvatore & S. K. Rastogi, Managerial Economics: Principles and Worldwide Applications, Oxford, 9th Edition, 2020, ISBN 978-0199496563.
3. Paul A Samuelson and William D Nordhaus, Economics, McGraw Hill, 19th Edition, 2009, ISBN 978-0073511290.
4. Christopher R. Thomas and S. Charles Maurice, Managerial Economics, Foundations of Business Analysis and Strategy, McGraw Hill, 12th Edition, 2020, ISBN 978-9389949995.
5. N. Gregory Mankiw, Principles of Microeconomics, Cengage, 7th Edition, 2019, ISBN 978-1305081673.

Managerial Economics – II

Subject code: BM60402
Credit: 2-0-0-2
Prerequisite: Nil

Course Introduction

The course is designed to equip the students with tools to understand and relate to the economic reality around them through an understanding of various macroeconomic concepts and to use the tools to evaluate the implications of government policy on businesses, sectors, industries, and the economy. To make the course application-oriented solutions of various real-life cases are included in the pedagogy.

Course Outcomes:

At the end of the course the students will be able to:

CO1: To describe macroeconomic aggregates such as output, unemployment, inflation, productivity, and the major challenges associated with the measurement of these aggregates.

CO2: To understand the role of the central bank and money supply, linkages between financial markets and the real economy, and how these linkages influence the impact of economic policies over different time horizons.

CO3: To apply the basics and rationale of Fiscal and Monetary policy instruments and their role in policy making and during the phases of the business cycles.

CO4: To analyse the international linkages of an open economy, international capital flows, balance of payments, and the determination of exchange rates and putting in practice.

CO5: To develop the capacity to evaluate existing economic models of economic usage with reference to the Indian economy.

CO6: To be able to design and formulate models based on learning and solving real-life problems.

Course Content

- **Module 1:** Macroeconomics Issues, Concepts & Model Building, National Income Accounting; Income & Spending; Money Interest & Income. Key Concepts- Gross Domestic Product. Calculation of Gross Domestic Product. Difference between GDP and GNP. Measuring GDP through various approaches- GDP according to product approach. GDP according to expenditure approach. GDP according to the income approach. Real Vs. Nominal GDP, GDP deflator Product-income-expenditure identity

- **Module 2:** Product & Money Market Analysis. Theory of National Income Determination; The Multiplier Effect. Aggregate Demand; Aggregate Supply Function; Money Market: Theory of Money Supply, Various Measures of Money Supply- M0, M1, M2, M3, M4.
- **Module 3:** Role of Central and Commercial Banks as Credit Mechanism. The Central Bank, money, and credit. The money stock and the money multiplier. The money multiplier, high-powered money, and adjustment. The Role of Commercial Bank as a Credit Creator. The process of Credit creation by individual banks and multiple banks. Case Insights on Current COVID-19
- **Module 4:** Monetary & Fiscal Policy. Quantitative and Qualitative tools of Credit Control – CRR, SLR, Repos, RRR, MSF, Margin Requirements, etc. to counter business cycles. Use of Fiscal tools to combat cyclical downturns. Fiscal Math using Excel. Case Insights on current COVID-19.
- **Module 5:** The Dynamics of Inflation & Unemployment. Inflation and aggregate supply curve. Dynamics of aggregate demand. Measurement CPI vs. WPI. The Trade-off between Inflation & Unemployment-Phillips Curve Short Vs. Long run
- **Module 6:** Exchange Rate Determination & Indian Economic Overview, Budget Analysis. Adjustment under fixed and flexible exchange rates. Exchange rate changes and Trade adjustments. The monetary approach to the Balance of Payments, the PPP Approach, and the Interest Rate Parity Approach. Case Insights on the current market crisis. Growth vs. Development; Role of Agriculture, Industry & Service Sector in Indian Economy; Economics Reforms. Analysis of the current Union Budget.

Textbook:

Frederic S. Mishkin, Macro Economics, Policy & Practices, Pearson, Second Edition, 2016, ISBN 978-9332579439.

Reference Books:

1. Andrew B. Abel & Ben Bernanke, Macro Economics, Pearson, 10th Edition, 2021, ISBN 9781292318615.
2. Oliver Blanchard, Macro Economics, Pearson, 6th Edition, 2017, ISBN 978-9332587601.
3. Mankiw N Gregory, Macro Economics, Cengage, 9th Edition, 2020, ISBN 978-0357133491.
4. D.N Dwivedi, Macro Economics, & Policy, McGraw Hill Education, 5th Edition, 2018, ISBN 978-9353163334.
5. Uma Kapila, Indian Economy since Independence, Academic Foundation, 33rd Edition, 2022.

Area: Human Resource Management

Area: Human Resource Management						
Sl. No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Credit**
Core Courses						
1	BM60101	Organizational Behaviour	2	0	0	2
2	BM60102	Organization Theory	2	0	0	2
3	BM62103	Human Resource Management	1.5	0	0.5	2
Elective Courses						
1	BM62109	HR Planning and Selection	1.5	**0**	**0.5**	**2**
2	BM62111	Labour Laws and Industrial Relations	1.5	**0**	**0.5**	**2**
3	BM62105	Performance Management Systems	1.5	**0**	**0.5**	**2**
4	BM62115	HR Analytics*	1.5	**0**	**0.5**	**2**
5	BM62107	Compensation and Reward Management	1.5	**0**	**0.5**	**2**
6	BM68102	Managerial Effectiveness	**Sessional**			**2**
7	BM62104	Leadership for Corporate Excellence	1.5	**0**	**0.5**	**2**
8	BM62106	Organization Development and Change	1.5	**0**	**0.5**	**2**
9	BM62108	HR Accounting and HR Audit-New Course	1.5	**0**	**0.5**	**2**
10	BM62113	Human Resource Development (T&D)	1.5	**0**	**0.5**	**2**
11	BM62114	Strategic Human Resource Management	1.5	**0**	**0.5**	**2**
12	BM62110	Competency Mapping and Building the Talent Pipeline	1.5	**0**	**0.5**	**2**
13	BM62112	Managing Employee Engagement	1.5	**0**	**0.5**	**2**
14	BM62117	Managing Diversity, Equity, and Inclusion	1.5	**0**	**0.5**	**2**

*Note: HR Analytics is also cross offered in Business Analytics

Organizational Behaviour

Subject Code: BM60101
Credit: 2-0-0 2
Prerequisite: Nil

Course Introduction

Understanding the dynamics of individual and interpersonal behaviour in organizational setting; developing students' knowledge and competence to deal with human problems of management; developing students' awareness and insight for personal and professional growth and finally making students aware about group formation, dynamics, functions and its effective management.

Course Outcomes:

At the end of the course, the students will be able to:

CO1: Remember the fundamental concepts of individual, group, and organizational behaviour.

CO2: Understand and relate to those micro aspects of individual behaviour such as learning, conditioning, perception etc. that might impact upon the larger organizational context,

CO3: Apply knowledge in group formation, group dynamics, functions, and the challenges of group management,

CO4: Analyse the various personality types, attitudes and utilize the knowledge for augmenting the performance in the organization,

CO5: Evaluate various nuances involved in leadership, and

CO6: Handle conflict resolution techniques in a more effective manner.

Course Content

- Introduction to OB & Diversity in Organization: Management Functions: Management roles & skills, Importance of OB, challenges &opportunities of OB, Diversity, Biographical characteristics affecting employee performance & understanding.
- Attitudes & Job Satisfaction: Types of Attitudes, Cognitive Dissonance Theory, Measuring Job Satisfaction, The effect of Job Satisfaction on Employee Performance, Employee Dissatisfaction, Global implications.
- Emotions & Moods: Basic Emotions, Basic Moods, Emotional Labour, Emotional Intelligence, OB Application of Emotions & Moods, Global Issues

- Personality & Values: Personality, Myers-Briggs Type Indicator The Big Five Personality Model, Importance of values, Types of values, Values across cultures (Global Implications), Self-Assessment test on Personality
- Perception & Individual Decision Making: Factors Influencing Perception, Person Perception, Decision making in Organization, Ethics in Decision Making
- Motivation: Brief on theories of motivation & concepts and application: Early theories of motivation: Maslow's Hierarchy of Needs, Theory X and Theory Y, Two Factor Theory, McClelland's Theory of Needs, Contemporary theories: ERG theory, Self-efficacy theory, Equity theory, Cognitive Evaluation theory, Goal setting theory, Expectancy theory, Job characteristics model, Rewards to motivate employees
- Concepts of groups, individual & the group, Group cohesion, development, structure and influence: Concepts of group, The nature of group dynamics, The individual and the group, Group formation, Group cohesion and development, Group structure: role, norm, status, Group influence, social loafing, Sources of influence
- Group Decision Making: Group vs. the Individual, Group Think & Group Shift & Group decision making techniques, Effective Groups, Self-Managing Teams, Advantages and Disadvantages of Groups,
- Understanding work teams: Difference between groups and teams, Types of Teams, Creating Effective Teams, Turning Individuals into team players.
- Communication: Basics of Communication, Process & Functions of Communication, Interpersonal Communication, Barriers to Communication, Organizational Communication, Gender differences in communication, Silence as Communication, Politically Correct Communication
- Leadership and issues in Leadership: Brief on theories, Charismatic and Transformational Leadership, Authentic Leadership, Trust and Servant Leadership, Leader as the mentor
- Power & Politics: Bases of Power, Dependency: The Key to Power; Power Tactics; Power in groups; Unequal power in the workplace; Politics: Power in Action; Causes and consequences of political behaviour.
- Conflict & Negotiation: Roots of conflict; The conflict process; confrontation and escalation; Negotiation: process, issues, cultural differences in negotiation, conflict resolution, third party negotiation
- Stress Management: Stress, potential sources of stress, Consequences of stress, Managing stress.

Textbook

1. Robbins, S., Judge, T.A. and Vohra, N., Organization Behavior, Pearson Publication, 18th Edition, 2018, ISBN 978-9353067038.

Reference books

1. McShane S., and Von Glinow, M., Organization Behavior, McGraw-Hill Publication, 7th Edition, 2014, ISBN 978-0077862589.
2. Fred Luthans, Organization Behavior, TMH publications, 12th Edition, 2010, ISBN 978-0073530352.
3. Uma Sekharan, Organization Behavior, TMH Publications, 2nd Edition, 2004, ISBN 978-0070581906.

Organization Theory

Subject Code: BM60102
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

Understanding and designing organization structure and appreciating the impact of size, strategy, technology, environment, power and culture on organizational dynamics and its effective functioning.

Course Outcomes

At the end of the course, the students will be able to:

CO1: Remember the evolution of organizations and conditions of organizational effectiveness,

CO2: Understand the components of organization structure and design and the typologies of organization structures,

CO3: Apply knowledge to gauge the impact of organizational size, technology, and environment on organizational structure,

CO4: Analyse the concepts of organizational change and organizational culture,

CO5: Evaluate organizational functioning in varied environments, and

CO6: Develop ability to understand the different organizational design options along with the strengths and weaknesses.

Course Contents

- Organization Theory and Evolution: Understanding the genesis of organizations and the organizational lifecycle.
- Dimensions of Organization Structure: The three pillars of organization structure i.e., complexity, formalization and centralization and their interconnections.
- Organization Effectiveness: Concepts, theories, and frameworks.
- Strategy and Organization Structure: Concepts, theories, and frameworks
- Size and Organization Structure: Concepts, theories, and frameworks
- Technology and Organization Structure: Concept, theories of Woodward, Perrow and Thompson, understanding the impact of technology on structure.
- Power-Control: Contingency perspectives, relation between structure and power control, Ethics, and the use of power
- Organizational Design Options: Understanding the key parts of the organization and their functions, five design options i.e., simple design, machine bureaucracy, professional bureaucracy, divisional designs, and adhocracy.
- Bureaucracy: Concept, Weberian origins, and dysfunctional consequences of bureaucracy.
- Adhocracy: Concept, examples, Matrix and Networked organizations, Innovations in organization design.
- Managing Environment: Inter-organizational relationships, resource dependence theory, population ecology theory, transaction costs theory.
- Organizational Change: Concept, types of change, managing change in organizations.
- Managing Organizational Culture: Concept, subcultures, transmission of organization culture, sources of organization culture, culture clash.

Textbook

Robbins, S. and Matthew, M., Organization Theory, Pearson Publication, 3rd Edition, 2009, ISBN 978-8131717301.

Reference books

1. Mintzberg, H., Structure in Fives Designing Effective Organizations, PHI Publication, 3rd Edition, 1992, ISBN 978-0138554798.
2. Daft, R., Organizational Theory and Design, Cengage publications, 13th Edition, 2020, ISBN 978-0357445143.
3. Jones, G., Organizational Theory and Design, Pearson Publications, 7th Edition, 2012, ISBN 978-0132729949

Human Resource Management

Subject Code: BM62103
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Today, HR managers play a major role in strategic decision making and are evolving as business partners. At the same time, Human Resource Management is no more limited to only HR personnel. Rather, every manager needs to work on it along with the HR department. Managers who are good at HRM can use their workforce in a more efficient and effective manner to gain competitive advantage for their organizations. The course aims to equip students with the tools and practices of HRM and help them appreciate they change they can affect in an organization by managing people in the best possible manner. It also aims at providing an overview of the current people challenges that organizations/ managers are facing today.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the different HR processes,

CO2: Understand the legal framework of HRM and the importance of harmonious Employee Relations,

CO3: Apply knowledge to basic HR functions and processes like Recruitment, training, performance management etc.,

CO4: Analyze the HR challenges and how to address them,

CO5: Evaluate the role of HR in today's corporate world, and

CO6: Develop ability to use basic tools and techniques of HRM like job evaluation, assessment center, competency mapping etc.

Course Contents

Module 1: HRM & Strategic HRM

- Introduction - Journey of HR from personnel management to strategic HRM, Environmental Influences on HRM, Functions of HR in organizations, Modern day challenges to HR
- Strategic HRM – Evolution of HR as a business partner, Need for Strategic HRM, HR Metrics, Using the VRIO Framework for competitive advantage.

Module 2: HR Processes

- Job Analysis – What is Job Analysis? Sources of data collection & methods of conducting a job analysis, Outcomes of a job analysis: Job description and job specification.
- Job Evaluation - What is Job Evaluation? Outcomes of job evaluation: Job banding leading to pay bands, Different methods of JE: Ranking, classification, Factor comparison and point method.
- Manpower Planning - Concept, Objectives & Methods
- Performance Management - Design principles of PMS, Stages of a PMS cycle - Goal setting, SMART goals, KPA and KPI, Balanced score card & Goal cascading, Mid-year review and feedback; Different rating scales – Graphic rating, Forced choice, Mixed standard scale, BARS, BOS; Methods of evaluation – rating, ranking, MBO; Rater errors – Halo effect, Horn effect, error of central tendency, leniency/ strictness error, recency error, attribution bias, similar-to-me error, stereotyping; Concept of Normalization – Need & process; Competency and assessment center
- Compensation & benefits' Administration – Types of Compensation, HR Metrics & Compensation, Legal Effects on Pay System, Base Pay System, Components of Pay Structures, Fixed & variable Pay, Types of benefits.
- Recruitment and Selection – Concepts, process, methods & evaluation
- T&D and Career Development – Concept, Methods, calculating training effectiveness using Kirkpatrick's model, Career Planning, Types of Career Paths, Schein's Career anchors and its implications on jobs.
- Employee engagement - Engagement drivers at workplace, Role of HR in enhancing engagement, Challenges in engaging millennials.

Module 3: Industrial Relations

- Introduction – IR scenario in India: Current issues and future challenges, Industrial disputes and preventive machinery and settlement
- Trade Union & Collective Bargaining – The Trade Union Act, 1926; Union recognition and problems, the process of bargaining, Conditions essential for effective bargaining
- Employee Grievance Management and Discipline

Textbook

Dessler, G., Human Resource Management, Pearson Publication, 15th Edition, 2017, ISBN 978-9352862658.

Reference books

1. Bohlander, G., Principles of HRM, Cengage publications, 16th Edition, 2013, ISBN 978-8131521663.
2. Sanghi, S., Human Resource Management, Vikas Publications, 2nd Edition, 2022, ISBN 978-9354535055.

Performance Management Systems

Subject Code: BM62105
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course acquaints students with the concept, processes and mechanics of performance management systems practiced in business organizations and enables them to learn the key concepts in measuring group and organization performance.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the principles of effective appraisals,

CO2: Understand the entire cycle of the performance management process i.e. the framing of goals, key result areas, appraisal and its various methods, review, monitoring and renewal,

CO3: Apply knowledge to understand the process of potential appraisal and use of automation in PMS,

CO4: Analyse the kinds of PMS followed in organizations,

CO5: Evaluate the best PMS followed by different industries, and

CO6: Identify the latest trends, issues and challenges in performance management and compensation systems in organizations today.

Course Contents

- **Module 1: Introduction to Performance Management Systems.** Introduction to PMS, Performance Planning
- **Module 2: Process of Performance Appraisal and Performance Review.** Process of Performance Appraisal. Absolute and Relative Methods of

Performance Appraisal. BARS, MBO and 360 degrees. Performance Management Review: Process and Techniques

- **Module 3: Measuring Individual /Group/Organizational Performance.** Performance Based Compensation. Team Performance Management. Balanced and HR Scorecards
- **Module 4: Future of PMS.** Performance Management and Mentoring. Potential Management. Use of automation in PMS. Contemporary issues in PMS

Textbook

Bagchi, S.N., Performance Management Systems, PHI Publication, 2nd Edition, 2013, ISBN 978-8131518724.

Reference books

1. Cardy, R.L., Performance Management, PHI publications, 2nd Edition, 2011, ISBN 978-0765626578.
2. Aguinis, H., Performance Management, Pearson Publications, 3rd Edition, 2013, ISBN 978-9332518155.
3. Doerr, J., Performance Management, Penguin Publications, 1st Edition, 2018.

Compensation and Reward Management

Subject Code: BM62107
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This elective acquaints students with the concept, processes and mechanics of compensation management system practiced in business organizations and enables them to learn the key concepts in reward management and benefits administration.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the principles of compensation management,

CO2: Understand and develop an appreciation for the various incentive schemes –individual, team and organizational,

CO3: Apply knowledge in understanding pay systems keeping in mind the issues of external and internal equity in organizations,

CO4: Analyze the methods of job evaluation,

CO5: Evaluate Internal and External Equity in Compensation, and

CO6: Design a pay system customized to the requirements of an organization.

Course Contents

- **Module 1: Introduction to Compensation Management.** The World of Pay and Compensation, Legal Issues in Compensation Management
- **Module 2: Internal and External Equity in Compensation.** Introduction to job evaluation, Hay method of job evaluation, Surveying market pay and compensation practices, Design of Pay Structure
- **Module 3: Benefits and Reward Management.** Measuring and paying for performance, Individual incentive plans, Gainsharing plans, long term incentives, Benefits and services
- **Module 4: Future of C&RM.** Executive and International Compensation, Use of automation in compensation, Future of C&RM

Textbook

Diganta Chakrabarti, Reward Management, Cengage, 1st Edition, 2022, ISBN 978-93-5573-389-4.

Reference books

1. Henderson, R., Compensation Management in a knowledge-based world, Pearson, 10th Edition, 2005, ISBN 978-0131494794.
2. Milkovich, G. Gerhardt, B. and Newman, J., Compensation, McGraw Hill Publications, 12th Edition, 2020, ISBN 978-9390185672.

HR Planning and Selection

Subject Code: BM62109
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Manpower Planning (MP) which is also called as Human Resource Planning consists of putting right number of people, right kind of people at the right place, right time, doing the right things for which they are suited for the achievement of goals of the organization. The course aims to teach students strategies for acquisition, utilization and development of human resources. Students will also learn replacement planning which analyses labour turnover, development and maintenance of employee

programmes and assess the future needs of the organization so that sufficient number of persons may be procured well in time. With the talent war growing aggressive in present times, Selection has assumed strategic importance. Today, a skilled manpower is being considered the greatest competitive advantage for an organization. This course intends to familiarize students with the various aspects (process, methods and tools used) of selection.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the latest selection tools in the corporate sector,

CO2: Understand the importance of manpower planning and the impact on other functions if this planning is not carried out with utmost care,

CO3: Apply knowledge to forecast manpower – both demand and supply using different techniques best suited to the role of the vacancy in hand,

CO4: Analyze current manpower inventories and match profiles,

CO5: Evaluate various selection procedures practiced in industries, and

CO6: Design Job Description & Specification formats for various roles.

Course Contents

- Forecasting Process, Demand Forecasting, Supply Forecasting
- Career Planning & Development
- Succession Planning
- Downsizing & Restructuring
- Mergers & Acquisitions
- Outsourcing
- Job Analysis and Profile Matching
- Hiring Process & Hiring Decision
- Internal & External Hiring
- On-boarding and Induction

Textbook

Gatewood, R. Hubert, S.I and Barrick, M.R., HR Selection, Cengage Publication, 8th Edition, 2015, ISBN 978-1305102682.

Reference books

1. Belcourt, M. McBey, K.J. and Yap, H.M., Strategic Human Resource Planning, Cengage Publication, 5th Edition.
2. Bhattacharya, D.K., Human Resource Planning, Excel publications, 3rd Edition, 2016, ISBN 978-9350620571.
3. Herbert G. Heneman III, Timothy A. Judge, Staffing Organization, McGraw Hill Publications, 5th Edition, 2012, ISBN 978-1259028625.

Labor Laws and Industrial Relations

Subject Code: BM62111
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course familiarizes the students with legal framework of relevant HR and Labour Laws affecting the Indian industries. Knowledge of legal aspects governing the labour administration and industrial relations is essential for all HR managers. Every HR manager must know the labour laws of that country where he is working, because most of the core HR functions are linked and according to the labour laws of concerned country. Maintaining proper labour relations between the employer & employee and between employees is imperative for organizational performance.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the labour laws applicable to different sectors,

CO2: Understand the role of labour administration in Industrial Relations,

CO3: Apply knowledge to articulate the major Industrial concepts and statutes learnt,

CO4: Analyse the structure, compensation and trends in the labour laws in India,

CO5: Evaluate the paradigm shifts in labour policy, and

CO6: Interpret laws and their applicability in different kinds of industries.

Course Contents

- Introduction to Labour - Occupational Structures in India, size of labour force, Features of Industrial Labour.
- The Trade Union Act, 1926

- Industrial Disputes Act, 1947
- Shops & Commercial Establishment Act – major States' specific
- Industrial Employment (Standing Orders) Act, 1946
- The Factories Act, 1948
- Contract Labour (Regulation & Abolition) Act, 1970
- The Payment of Bonus Act, 1965
- The Employees' State Insurance Act, 1948
- The Workmen's Compensation Act, 1923
- The Payment of Gratuity Act, 1972
- The Employees' Provident Funds and Miscellaneous Provisions Act, 1952
- The Payment of Wages Act, 1936
- Minimum Wages Act, 1948
- Equal Remuneration Act, 1976
- Building & Other Construction Workers' Act, 1996
- New Wage Code
- Negotiation and Collective Bargaining
- Quasi-Judicial function, Discipline
- Labour Turnover and Absenteeism

Textbook

P.K. Padhi, Labor and Industrial Laws, PHI Publication, 4th Edition, 2019, ISBN 978-9388028936.

Reference books

1. K. M. Pillai, Labour and Industrial Laws, Allahabad Law Agency, 18th Edition, 2017, ISBN 978-8189532062.
2. H.L. Kumar, Industrial Relations, Trade Unions & Labour Legislations, Universal Law publications, 4th Edition.
3. P. L. Malik, Industrial Law, Eastern Book Company, 25th Edition, 2015, ISBN 978-9351453239.
4. S. N. Mishra, Labour and Industrial Law, Central Law Publications, 27th Edition, 2020.
5. Sinha, Sinha & Shekhar, HRD & Labour Law, Pearson Education, 3rd Edition

Human Resource Development (T&D)

Subject Code: BM62113
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course enables students to understand the importance of employee training and development for attainment of business results and objectives, to develop in students the necessary competencies to research, design, develop, deliver and ultimately monitor training and developmental activities, processes and measure its impact on business results.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the different trainer styles,

CO2: Understand the importance of training and development in the management and growth of human resources in organizations,

CO3: Apply learning and demonstrate the learning on training need assessment,

CO4: Analyze cost benefit assessments and the need for the continuous transfer of learning,

CO5: Evaluate the different methods and techniques of training implementation, and

CO6: Design generic and specific/customized training programmes.

Course Contents

- **Module 1: Introduction to Training and Development:** Introduction to T&D, Learning and Training, Motivation and Training,: TA and Trainer Styles
- **Module 2: Training Need Analysis and Design of Training Programmes:** Training Need Analysis, Training Design
- **Module 3: Training Implementation/Delivery and Training Evaluation:** Development and Implementation of Training, Off the job training, On the job training, Use of technology in training, Training Evaluation
- **Module 4: Cost Benefit Analysis of Training Programmes:** CBA, Future of T&D

Textbook

Saks, A.M & Haccoun, R.R., Managing Performance through Training and Development, Cengage, 6th Edition, 2015, ISBN 978-8131527818.

Reference books

1. Noe, Raymond, Jr., Amitabh Deo Kodwani, Employee Training and Development, TMH, 7th Edition, 2018, ISBN 978-9353161651.
2. Lynton, R.P. & Pareekh, U., Training for Organizational Transformation, Sage Publications, 3rd Edition.
3. Blanchard, P.N. & Thacker, J.W., Effective Training: Systems, Strategies and Practices, Pearson, 4th Edition, 2008, ISBN 978-8120335448.

Strategic Human Resource Management

Subject Code: BM62114
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course presents a thorough and systematic coverage of issues related to strategic human resource management.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the importance of strategic planning for business success,

CO2: Understand the models of strategy, the process of Strategic Management,

CO3: Apply learning to understand Market driven strategy, Resource driven strategy,

CO4: Analyse impact of Geopolitics on business,

CO5: Evaluate Human Resource Management at the backdrop of uncertainties, and

CO6: Integrate the activities of HR with the organization's goals.

Course Contents

- Challenges in strategic Human Resource Management:
- Impact of Geopolitics on Business
- Impact of Technology
- Challenges related to technology, behaviour, demographic change, and diversity.

- Importance of strategic planning for business success, Business Strategy-Market driven strategy, Resource driven strategy
- The Human resource environment of business, human resource system- its macro and micro dimensions, strategic management of HR, Strategic HR planning
- Strategic approach to manpower acquisition – recruitment and selection, Strategic development of human resources
- Strategic approach to management structure, job design and work system, strategic management of performance, strategic approach to compensation and benefits
- Strategic approach to Talent management system. Uses data to focus on key measures for evaluation of L&D
- Identifies the appropriateness of relevant social media to enhance branding, learning effectiveness, Evaluate quality and utility of e-learning alternatives.
- Strategic approach to Industrial relations, outsourcing and its HR implications, Mergers, and acquisitions and HRM.

Textbook

Das Pulak, Strategic Human Resource Management, Cengage, 1st Edition, 2011, ISBN 978-8131511480.

Reference books

1. Charles R. Greer, Strategic Human Resource Management, Pearson, 2nd Edition, 2002, ISBN 978-8177582062.
2. Jaffrey A Mello, Strategic Human Resource Management, Cengage Publications, 4th Edition, 2013, ISBN 978-1285426792.

Organization Development and Change

Subject Code: BM62106
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Organizations world over have a continuous need to adapt to the ever-increasing environmental demands and reinvent themselves for their sustenance and growth. The course is designed to make students appreciate the dynamics of organization during fast paced change and facilitate the needed effectiveness improvement process using behavioral science knowledge and theories of planned change.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the theories of organizational change,

CO2: Understand the nature of planned change and the essential competencies of an effective OD practitioner,

CO3: Apply learning to familiarize with the process of organization development,

CO4: Analyse different OD interventions to ensure alignment,

CO5: Evaluate OD in non-industrial settings such as health care, school system, public sector undertakings and family-owned businesses, and

CO6: Customize OD interventions.

Course Contents

- Introduction and overview of change and development
- Organizational Change – Types, Levers & Theories, Organizational Change – Process, Change Agents, Models of Designing & implementing Change, Resistance to Change, Consequences of Change
- Steps in OD: Entering and contracting; diagnosing organizations; diagnosing groups and jobs; collecting and analyzing diagnostic information; feeding back diagnostic information; designing interventions; leading and managing change; evaluating and institutionalizing OD interventions: human process interventions; techno-structural interventions; human resource management interventions; strategic interventions.
- Emerging trends in OD – OD for economic, ecological, and social outcomes
- The future direction in Organization Development

Textbook

Thomas G. Cummings & Christopher G. Worley, Organization Development & Change, Cengage Publication, 10th Edition, 2013, ISBN 978-1133190455.

Reference book

Wendell L. French and Cecil H. Bell, Jr., Veena Vohra, Organization Development – Behavioral Science Interventions for Organization Improvement, PHI Publication, 6th Edition, 2017, ISBN 978-9332575264.

Leadership for Corporate Excellence

Subject Code: BM62104
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course enables the students to understand the basics of leadership attributes in general and the art of corporate leadership in particular; understand how leadership function contributes to the management of people and organizations. It develops insight into the practices associated with effective leadership, pinpoints some of the knowledge and skills students will need, to become an effective leader and manager. This course helps to develop leadership skills that students can apply outside the classroom.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the basics of leadership attributes,

CO2: Understand and learn how to communicate better in an organization,

CO3: Apply learning to inculcate the nuances involved in becoming effective leaders,

CO4: Analyse various leadership styles,

CO5: Evaluate the situational aspects of Leadership, and

CO6: Develop emotional intelligence to become effective leaders.

Course Contents

- The meaning and relevance of Leadership. The meaning of Leadership, The Impact of Leadership on Organizational Performance, Leadership Roles, The Satisfactions and Frustrations of Leadership, A Framework for Understanding Leadership
- Personal attributes of Leader. Personality Traits of Effective Leaders, Leadership Motives, The Influence of Heredity and Environment on Leadership, The Strengths and Limitations of the Trait Approach.
- Charismatic and Transformational Aspects of Leaders, The Meaning of Charisma, Types of Charismatic Leaders, Characteristics of Charismatic Leaders, The Vision Component of Charismatic Leadership, The communication Style of Charismatic Leaders, The Development of Charisma, Transformational Leadership, Concerns About Charismatic Leadership

- Leadership Actions, Attitudes, and Style, The Classic Dimensions of Initiating Structure and Consideration, Relationship- Oriented Attitudes and Behaviours, 360-Degree Feedback for Fine-Tuning a Leadership Approach, Leadership Approach
- How Leaders Respond to The Situation at Hand. Situational Influences on Effective Leadership Behaviour, Fiedler's Contingency Theory of Leadership Effectiveness, The Path-Goal Theory of Leadership Effectiveness, The Hersey-Blanchard Situational Leadership Model, The Normative Decision Model, Cognitive Resource Theory: How Intelligence, Experience, and Stress Influence Leadership, Contingency Leadership in the Executive Studies, Leadership during a Crisis
- The Moral aspects of leadership. A sampling of Unethical Leadership behaviours, Leadership and Social Responsibility, Initiatives for Achieving Ethical and Socially Responsible Organization, Ethical behaviour and Organizational Performance.
- How leaders exert influence? A model of Power and Influence, Description and Explanation of Influence Tactics, Relative Effectiveness and Sequencing of Influence Tactics
- Enhancing teamwork within the group. Team Leadership Versus Solo Leadership, Advantages and Disadvantages of Group work and Teamwork, The Leader's Role in the Team-Base Organization, Leader Actions That Foster Teamwork, Outdoor Training and Team Development, The Leader-Member Exchange Model and Teamwork
- The Leader as a motivator and coach. Expectancy Theory and Motivational Skills, Goal Theory, Behaviour Modification and Motivational Skills, Using Recognition to Motivate others, Coaching as a Leadership Philosophy, Coaching Skills and Techniques, Executive Coaching and Leadership Effectiveness
- Communicating with others and Resolving Conflict. Evidence About Communication and Leadership, Inspirational and Powerful Communication, Supportive Communication, Overcoming Cross-Cultural Communication Barriers, The Leader's Role in Resolving Conflict and Negotiating
- The Creative and Innovative aspects of a Leader. Steps in the Creative Process, Characteristics of Creative Leaders, Overcoming Traditional Thinking as a Creative Strategy, Organizational methods to Enhance Creativity, Self-Help Techniques to Enhance Creative Problem Solving, establishing a Climate for Creative Thinking, Additional Leadership Practice That Enhance Innovation.

- Global and Cross-Cultural Leadership. The advantages of Managing for Diversity, Cultural Factors Influencing Leadership Practice, Culturally Sensitive and Global Leadership Skills, Leadership Initiatively for Achieving Cultural Diversity, Developing the Multicultural Organization
- Thinking Strategically and Managing Knowledge. The Nature of Strategic Leadership, conducting a SWOT Analysis, A Sampling of Business Strategies formulated by Leader, Knowledge Management and the Learning Organization
- The development of Leaders and Succession planning and Followership. Development Through Self-Awareness and Self-Discipline, Development Through Education, Experience, and Mentoring, Leadership Development Programs, Evaluations of Leadership Development Efforts, Leadership Succession.
- How leaders Attain and Maintain power? Sources and Types of Power, Bases of Power and Transformational and Transactional Leadership, Tactics for Becoming an Empowering Leader, Factors That Contribute to Organizational Politics, Political Tactics and Strategies, Exercising Control over Dysfunctional Politics

Textbook

DuBrin, A.J., Principles of Leadership, Cengage Publication, 8th Edition, 2015, ISBN 978-1285866369.

Reference books

1. Daft, R.L., The leadership experience, Cengage Publication, 5th Edition, 2010.
2. Stephen Covey, 7 habits of highly effective people, Franklin Covey & Co, 4th Edition.
3. Allio, R.J., Leadership: Myths and Realities, Tata McGraw Hill, 1999, ISBN 978-0074631256.
4. Hughes, R.L., Ginnet, R.C., Curphy, G.J., Leadership: Enhancing the lessons of Experience, TMH, 8th Edition, 2014, ISBN 978-0077862404.

Managerial Effectiveness (Sessional)

Subject Code: BM68102
Credit: 0-0-2 2
Prerequisite: Nil

Introduction

This program aims to help students to understand their strengths to design a map of their life and objectives therein, inner potential through psychometric tools, their relationship orientation, emotions and impact on their environment, how to take appropriate decisions using different tools, conflict resolution styles contextual to their life and organization.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the importance of understanding self above everything else,

CO2: Understand their inner potential on undertaking certain psychometric profiling,

CO3: Apply knowledge in making appropriate decisions conducive to their life and organizational environment,

CO4: Analyze their relationship orientation and emotional intelligence,

CO5: Evaluate different emotions and their impact on their environment, and

CO6: Identify their strengths in order to design an autobiographical map of their past, present and future.

Course Contents

- Understanding the context
- Managing People
- Managing Tasks
- Managing Self
- Managing Conflict

Textbook

Papp, Erich, Leadership by Choice: Increasing Influence and Effectiveness through Self-Management, John Wiley & Sons Publication, 4th Edition, 2012.

Reference books

1. David Rock, Quiet Leadership, Harper Collins Publishers, Kindle Edition, 2009, ISBN 978-0060835910.
2. Stephen Covey, 7 habits of highly effective people, Free Press, 4th Edition, 2013.
3. Michael Hall, Movie Mind directing your mental cinema, Neuro-Semantic Publications, 3rd Edition, 2003.

HR Accounting and HR Audit

Subject Code: BM62108
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The course is designed to enable students to understand through Human Resource Accounting (HRA), in financial terms, the effectiveness of the HR activities and the use of people in an organization. The course also aims to make students understand the importance of Human Resource Audit, which is an organized official process, conducted to ensure compliance and improve HR practices.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the objectives of HR Accounting and Auditing,

CO2: Understand that expenditures associated with human resources are reported as assets on the balance sheet in contrast to the conventional accounting approach which treats costs related to a company's human resources as expenses on the income statement that decrease profit,

CO3: Apply learning to relate people as the organizational resources,

CO4: Analyse costs incurred by organizations to recruit, select, employ, train and develop employees and judge their economic value to the organization,

CO5: Evaluate different methods to account for HR, and

CO6: Audit to ensure compliance, improve HR practices, train managers, prepare for potential audit or litigation, gain an understanding of department's environment and correct errors.

Course Contents

- Human Resource Accounting – Meaning, Need and Objectives of HR Accounting
- Historical Development of Human Resource Accounting
- Cost of Human Resource – Acquisition Cost, Training and Development Cost and Additional Cost
- Benefits and Limitations of Human Resource Accounting
- Methods of Human Resource Accounting
- Statutory Provisions Governing HR Accounts
- Human Resource Accounting Practices in India
- Human Resource Audit – Meaning, Features, Objectives of HR Audit, Benefits and Limitations of HR Audit, Need and Significance of HR Audit
- Process of HR Audit
- Approaches of HR Audit
- Principles of Effective HR Auditing
- Role of HR Auditor
- Methods of Conducting HR Audit – Interview, Workshop, Observation, Questionnaire
- Components of HR Audit
- Areas Covered by HR Audit

Textbooks

1. Suresh Kumar Pandey, Human Resource Accounting in India, Lambert Academy Publishing, 1st Edition, 2012, ISBN 3848486687.
2. T V Rao, HRD Audit: Evaluating the Human Resource Function for Business Improvement, Sage Publications, 2nd Edition.

Reference book

Kanaka Raju K, Jr., Human Resource Accounting, Scholars' Press, 1st Edition, 2013, ISBN 10- 3639700619.

Competency Mapping and Building the Talent Pipeline

Subject Code: BM62110
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The course will help students understand competency based Human Resource Management. This will equip them with techniques of identifying and defining competencies. This will equip them to validate generic and specific competency models, Designing and developing assessment centre.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the critical competencies for critical roles,

CO2: Understand how to conduct competency mapping exercise,

CO3: Apply learning to conduct reliability validity checks,

CO4: Analyze Competency requirement of roles at different levels,

CO5: Evaluate Behavioural Indicators, and

CO6: Develop Competency Model and Design Assessment Centre.

Course Contents

- Definition and types of competencies
- Identification of competency
- Documentation related to competency.
- Competency requirement of roles at different levels
- Competency modelling
- Behavioural Indicators
- Assessment of competency during hiring and for growth
- Competency based processes (including career and succession planning)
- Measurements related to competency.
- Competency based design and reliability validity checks.
- Designing competency inventory and aid organization movement

Textbook

Seema Sanghi, The Handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations, Sage Publications, 3rd Edition, 2016, ISBN 978-9385985157.

Reference book

Ganesh Shermon, Anavir Shermon, Talent Mapping - Competency Based Workforce Planning, Lulu.com, 1st Edition, 2016, ISBN 978-1365616778.

Managing Employee Engagement

Subject Code: BM62112
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course familiarizes the students about the relevance and significance of not only attracting but more importantly retaining talented people in organizations with a special focus on career management, benefits administration, managing workforce diversity, and administration. Employee Engagement involves individual and organizational development in response to a changing and complex operating environment. It is not just limited to attracting the best people from the industry, but it is a continuous process that involves sourcing, hiring, developing, retaining and promoting them while meeting the organization's requirements simultaneously. This course will equip the students with the necessary skills and knowledge required for talent recognition, management, retention and development; a sure way to ensure continuity and success.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the importance and benefits of talent management,

CO2: Understand replacement planning and traditional processes,

CO3: Apply learning to identify types of talent and understand life cycle of Employee Engagement,

CO4: Analyse methods to determine talent for a position,

CO5: Evaluate key Employee Engagement phases for implementing a talent management program, and

CO6: Develop questions that help them to recognize talent.

Course Contents

- Introduction to Employee Engagement:
- Building Blocks for Employee Engagement:
- Life Cycle of Employee Engagement
- Employee Engagement System
- Approaches to Employee Engagement:
- Employee Engagement and Organizational Environment:
- Talent development budget, contingency plan for talent.
- Talent Acquisition
- Employee Engagement and Retention
- Role of Information Technology in effective Employee Engagement Systems
- Role of Information Technology in effective Employee Engagement Systems
- Role of HR in Employee Engagement:
- Measuring Performance, Assessment and Development Centre:
- Compensation and reward strategies for Effective Employee Engagement:
- Compensation and reward strategies for Effective Employee Engagement:
- Employee Engagement and Corporate Restructuring:
- Contemporary Employee Engagement Issues, Challenges, Best Practices
- Best Practices of Employee Engagement, Employee Engagement in India.

Textbook

Gowri Joshi and Veena Vohra, Talent Management, Cengage Publications, 1st Edition, 2017, ISBN 978-9386858658.

Reference books

1. Marion Devine, Managing Talent, The Economist, 2019.
2. Dorothy R. Berger, Lance A. Berger, The Talent Management Handbook, Making Culture a Competitive Advantage by Acquiring, Identifying, Developing, and Promoting the Best People, TMH, 3rd Edition, ISBN 978-1259863554.

Managing Diversity, Equity, and Inclusion

Subject Code: BM62117
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Organizations are realizing that managing an increasingly diverse workforce is no longer just an issue of compliance, but being inclusive is a means to developing superior human capital and thus leveraging a competitive advantage in the marketplace. This course aims at enabling students understand the nuances and complexities in the domain of diversity and inclusion. Using an experiential and case-based approach, students will get a chance to look at their own stances related to diversity, gain insights into organizational challenges in the area and understand the complexities of building inclusive organizations.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the importance of diversity, equity and inclusion for the management and growth of human resources in organizations,

CO2: Understand the different dimensions of diversity that exist in an organization,

CO3: Apply the role of prejudice and stereotyping on diversity, equity and inclusion,

CO4: Analyse the issues that arise with diversities and the challenges that arise in the process of inclusion,

CO5: Evaluate work practices which nurture diversity, equity, and inclusion, and

CO6: Design strategies to make organizations more inclusive.

Course Contents

- **Module I**
    1. Introduction
    2. Dynamics of Inclusion at the Workplace
- **Module II**
    1. Issues and concerns faced in a diverse culture.
    2. Diversity Challenges in the organization
    3. Prejudice, Stereotype and the Biases we hold.

- **Module III**
    1. Different Dimensions of Diversity – Gender, Age, Sexual Orientation & Gender Identity, Ability, Appearance, Caste, Class, Ethnicity
    2. Intersectionality in DEI
    3. Statutory dimensions of DEI – the legal landscape
- **Module IV** - Social context and its impact on Prejudice and Stereotyping
- **Module V** - Organizational practices in DEI; Building an Inclusive Organization; Sensitivity Training Courses of DEI

Textbook

Marion Devine, Diversity in Organizations, The Economist, 2019.

Reference books

1. Maria Triana, Managing Diversity in Organizations: A Global Perspective, Routledge, 1st Edition, 2017, ISBN 978-1138917026.
2. HBR's 10 Must Reads on Diversity, HBS Publications, 2019.

HR Analytics

Subject Code: BM62115
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course is designed with specific intent to enable students to understand the application of system design and importance of data related to all the verticals of human resources. The course also intends to introduce students to the scope, techniques, benefits and challenges of analytics in HRM. Analytics has played a critical role in this journey of HR transformation. This course will specifically focus on the applied methods and techniques with an output orientation for improving the human resource functions in large scale organizations. The frameworks, models, and hands-on analytical approaches will equip the participants with developing the SMART (specific, measurable, attainable, reliable, and time bound) targets and identifying business contributions of the HR function in their respective organizations.

Course Outcomes

At the end of the course, the students will be able to

CO1: To enable students, remember the levels of HR Analytics and its use in different HR verticals.

CO 2: To enable students, understand the overview of HR system design and models.

CO 3: To enable students, apply the use of data for decision making in different HR verticals.

CO 4: To enable students, analyse various HR problems to identify the relevant techniques to measure metrices.

CO 5: To enable students, evaluate the utility of both descriptive and predictive analytics to measure HR metrices.

CO 6: To enable students to create their own analytics model for any given vertical of HR.

Course Contents

- Introduction to Systems Design. Systems Design, Living Systems Design, HR Systems Design, Documentation of Policies, Flow Diagrams and Work Instructions Automation and Analytics. Basic Automation, increase in productivity through analytics, synchronizing process change with automation, HR Analytics in perspective, Challenges, and Issues
- Agile HR Analytics. Explain the people analytics cycle, Understand the agile framework, Connect agile principles with HR challenges.
- Proving Analytics value by using the HR Value Chain. Understand how the HR Value Chain works, describe how the HR Value Chain can be used to achieve business outcomes from HR, Explain how HR processes work in conjunction with HR outcomes and organizational outcomes,
- Treatment of HR Data. Understand how to manage data and automate it, Visualizing data and analytics, Describe the importance of a pilot analysis, explain capability & compliance building of HR analytics, describe what HRIS is not, Explain the different tools HR analytics can use.
- Data Cleaning and HR Metrics. Explain the purpose of HR metrics/data, Understand the three categories of performance, Describe the performance of several HR operations, create several descriptive statistics in R, understand how to clean HR data in R, Transform HR data into plots and graphs in R, describe how to transform strategic goals to HR metrics.
- Statistics in HR. Correlation Analysis, Regression Analysis, HR Analytics maturity
- Data Reporting Insights. Understand how predictive analytics work, Describe the use of machine learning in HR analytics, Explain the difference between predictive & regression analyses, Describe the 4 rules of

reporting HR analytics, Understand the mindset in reporting HR analytics, Explain the importance of data visualization.

Textbook

S Dhir, and S Pal, HR Analytics: Theory and Application, Cengage, 1st Edition, 2020, ISBN 978-9353505295.

Reference Book

Rama Shankar Yadav and Sunil Maheswari, HR Analytics: Connecting Data and Theory, Wiley, 1st Edition, 2020, ISBN 978-9390421558.

Area: Financial Management

Course Code	Subject	L	T	P	Credit
Core Courses					
BM62201	Accounting for Managers	1.5	0	0.5	2
BM60202	Cost and Management Accounting	2	0	0	2
BM60204	Corporate Finance – I	2	0	0	2
Elective Courses					
BM62203	Corporate Finance-II	1.5	**0**	**0.5**	**2**
BM62205	Security Analysis & Portfolio Management	1.5	**0**	**0.5**	**2**
BM62207	International Financial Management	1.5	**0**	**0.5**	**2**
BM62210	Financial Reporting and Corporate Governance	1.5	**0**	**0.5**	**2**
BM62213	Banking & Financial Services	1.5	**0**	**0.5**	**2**
BM62206	Mergers, Acquisitions & Corporate Restructuring	1.5	**0**	**0.5**	**2**
BM62218	Project & Infrastructure Finance	1.5	**0**	**0.5**	**2**
BM62208	Derivatives & Risk Management	1.5	**0**	**0.5**	**2**
BM62209	Business Analysis and Valuation	1.5	**0**	**0.5**	**2**
BM62217	Management Control System	1.5	**0**	**0.5**	**2**
BM62215	Financial Time Series & Analysis*	1.5	**0**	**0.5**	**2**

BM62212	Risk Management in Banks	1.5	**0**	**0.5**	**2**
BM62214	Fixed Income and Alternative Investment	1.5	**0**	**0.5**	**2**
BM62211	Financial Markets and Regulation	1.5	**0**	**0.5**	**2**
BM62219	Quantitative Finance Using R	1.5	**0**	**0.5**	**2**
BM62318	Pricing Management **	1.5	**0**	**0.5**	**2**
BM62216	Behavioural Finance	1.5	**0**	**0.5**	**2**

Note: *Course is cross offered in Business Analytics. Syllabus details are provided there.

** Course is also offered as a part of the Marketing Management area of specialization.

Accounting for Managers

Subject Code: BM62201
Credit: 1.5-0- 0.5- 2
Prerequisite: Nil

Introduction

The core objective of the course is to understand the financial statements of different companies and for that the various dynamics associated with the course need to be understood by the student. Being a management student is expected to know the operational knowledge of various terms related to the accounting which will help for better understanding of the financial reports of the companies. Especially various financial statements like income statement, Balance sheet, cash flow statement, statement of change in equity and notes to accounts. At the same time awareness of recent development in accounting.

Course outcomes

At the end of the course, the students will be able to

CO1 Remember all the accounting concepts.

CO2 Understand the various concepts.

CO3 Apply the concepts for the real-life experience.

CO4 Analyse the accounting information.

CO5 Evaluate the various alternatives of accounting information.

CO6 Create the new ideas differently for the analysis of financial statements.

Course Content

- **Accounting basic and process:** Accounting process and financial statement preparation as per the Indian Company Act 2013
- **Indian Accounting Standards in convergence with IFRS:** Ind AS-1: Presentation of Financial Statements; Ind AS-7: Statement of Cash flows; Ind AS-8: Accounting Policies, Changes in Accounting Estimates and Errors; Ind AS-10: Events after the reporting Period; Ind AS 18- Revenue Recognition (Goods and Services); Ind AS-37- Provision, Contingent liabilities, and Contingent Assets.
- **Cash flow statement preparation and analysis-** stand alone and consolidated financial statements.
- **Company Annual Report-** discussion on annual report contents including schedules, management discussion and investor presentation by companies.
- **Analysis of Financial Statement** – how to read balance sheet, tools used for analysis of Financial Statements- Ratio Analysis- Balance Sheet Ratios, Profit and loss account and Inter-statement ratio.
- **Financial Planning**- Financial planning and forecasting, projected cash flow estimation, pro-forma financial statement preparation.
- **Sectoral Financial Statement Analysis** – analysis of financial statements of banks, insurance companies, non-profit organizations.

Textbook

Narayan Swamy R, Financial Accounting -A Managerial Perspective, PHI Publication, 2003, ISBN 8120314417.

Reference Books

1. T.P. Ghosh, Financial Accounting for Managers, Taxmann, 4th Edition, 2009, ISBN 978-8171945566.
2. Ramchandran N & Ramkumar K, Financial Accounting for Managers, Mcgraw Hill, 5th Edition, 2020, ISBN 9789389811735.
3. Anthony Robert N, Accounting (Text & Cases), TMH Publication, 13th Edition, 2017, ISBN 978-1259097126.

Cost & Management Accounting

Subject Code:BM60202
Credit-2-0-0-2
Prerequisite: Nil

Introduction

This course of Cost and Management Accounting has been designed to equip students with the desired skill set and knowledge, which will help them to become better decision makers to carry out their responsibility at different managerial positions. The course guides the students to collect relevant information to make the most beneficial use of it in decision making. The course teaches the mechanisms to evaluate the performance of departments/jobs/individuals and to suggest control mechanisms to bring the job to the track, if found necessary. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes

At the end of the course, the students will be able to

CO1: To learn the basic cost concepts and tools of costing applicable in daily business operations.

CO2: To understand the usefulness of cost information and their application in business decisions.

CO3: To apply the costing tools and techniques in management decisions.

CO4: To Analyse the different methods of costing suitable for different types of business set ups.

CO5: To Evaluate the business situations and maximize the profit of the organization.

CO6: To Create MIS and Performance reports for the control purpose need of higher management template to evaluate the cost control system of the organisation.

Course Contents

- **Managerial Accounting and Cost Concepts-** General Cost Classification-Product costs and Period costs, Fixed Cost/Variable cost, Opportunity cost, Sunk Cost, cost flow in different business set up.
- **Job order costing**- Allocation and Absorption of Indirect cost (Overhead): Primary and Secondary Distribution, costing of product.
- **Process Costing**-Cost flow in Process Costing, Costing of completed goods and incomplete goods in process unit.

- **Activity Based Costing**-Why ABC? ABC vs. Traditional Costing, Designing an Activity Based Costing System, Limitations of Activity Based Costing
- **Cost Volume Profit Analysis**-Cost Behaviour Pattern, Contribution Margin income statement, Break-Even Analysis, Cost-volume-profit analysis, margin of safety,
- **Relevant costs for decision making** – Relevant cost, use of cost information in short term decision making, shut down decision, make or buy decision, segmented profit planning decision, product mix decisions, etc.
- **Profit Planning and performance analysis** -The Basic Framework of Budgeting, Preparing the Master Budget, Operating and financial Budget, Cash Budget and budgetary control.
- **Variance analysis and MIS reporting** – Performance evaluation, Activity Variance, Revenue and Cost variance, efficiency ratios etc.

Textbook

Routray & Mohapatra, Cost and Management Accounting, S.Chand, 1st Edition

Reference Books

1. Colin Drury, Management and Cost Accounting, Cengage, 7th Edition, 2007, ISBN 978-1844805662.
2. Paresh Shah, Basic financial Accounting for Management, Oxford Publications, 3rd Edition, 2019, ISBN 978-0199494439.
3. Garrison, Noreen & Brewer, Managerial Accounting, McGraw Hill, 14th Edition, 2017, ISBN 978-9352602155.
4. Horngren, Datar Rajan, Cost Accounting, Pearson, 16th Edition, 2017, ISBN 978-0134475585.

Corporate Finance – I

Subject code: BM60204
Credit: 1.5-0-0.5-2

Prerequisite:

- Knowledge of financial accounting including financial statement analysis and the structure of Indian financial system are essential to understand the course better.
- Basic finance knowledge with stock market is required to relate the topics with real life cases.
- Students should have the basic excel functions to use it independently.

Introduction

The course, Corporate Finance I, is targeted at explaining the finance function of business organizations. It emphasizes how the CFOs take financial decisions for the wealth maximization of the shareholders. The subject focuses on effective financial management of investment (both long term and short term) of business firms besides value of money concepts, investment risk and return estimations and the general financial environment of the country.

Course Outcomes:

After completion of the course, students will be able to

CO1: Describe the financial management framework works including country's financial system.

CO2: Understand the role and functions of a CFO.

CO3: Apply the concept of time & value of money in financial decision-making process.

CO4: Analyse stock investment decision from risk and return prospective.

CO5: Evaluate the capital investment process.

CO6: Estimate and manage the working capital of businesses.

Course Content:

Introduction to Corporate Finance & Financial Environment: Understanding the Finance function, Financial Manager's role, Shareholders wealth maximization, agency cost/theory. Significance of Environment, social and corporate governance (ESG) aspects in corporate financial management practices. Overview of Indian financial system; stock market operations- both cash & derivative market

Time Value of Money- Importance of TVM in financial decision making, present value, future value estimations- use of excel functions in value estimations.

Valuation of Stocks and Bonds- how common stocks are valued**-** dividend discounting model, discounted cash flow model, bond valuation. Use of excel functions in estimation and analysis.

Cost of capital Estimation- component cost and weighted average cost of capital and opportunity cost estimation, yield to maturity (YTM) etc. Use of excel functions in estimation and analysis.

Risk and Return: How to measure historical and expected return, risk measurement, portfolio risk and return estimation, CAPM, Beta estimation and interpretations, Security Market Line. Use of excel functions in estimation and analysis.

Leverage Analysis: Operating leverage and financial leverage, EBIT-EPS relationship. Use of excel functions in estimation and analysis.

Long term Investment Decision: Cash Flow estimation, Capital budgeting concepts, cash flow estimation, methods of capital investment evaluation-NPV, IRR and other methods. Use of excel functions in estimation and analysis.

Working Capital Management: liquidity and profitability concept, working capital cycle, working capital estimation, introduction to the components of working capital- inventory, receivables, cash, sources of short-term finance.

Textbook:

Fundamentals of Financial Management by Brigham & Houston; CENGAGE, 14th Edition, 2021, ISBN 978-9390555673.

Reference Books:

1. Financial Management: Theory and Practice by Prasanna Chandra; McGraw Hill, 2022, ISBN 978-9355322203.
2. Corporate Finance: Theory & Practice by Damodaran; Wiley, 2nd Edition, 2003, ISBN 978-0471283324.
3. Financial Management by IM Pandey, Vikas Publication, 12th Edition, 2021, ISBN 978-9390577255.
4. Lawrence J Gitman, Principles of Managerial Finance, Pearson Publication, 11th Edition, 2010, ISBN 978-8177585544.
5. Stephen A Ross, R W Westerfield, Jeffrey Jaffe and R K Kakani, Corporate Finance, TMH Publishing, 8th Edition, 2006, ISBN 978-0073337180.
6. Alan C Shapiro and S D Balbirer, Modern Corporate Finance, Pearson Education, 1999, ISBN 9780130800985.
7. Financial Management: Text, Problems and Cases, by M Y Khan and P K Jain, , TMH Publishing, 6th Edition, 2011, ISBN 978-0071067850.
8. Principles of Corporate Finance, by Richard A. Brealey, Stewart C. Myers, Franklin Allen and Pitabas Mohanty. McGraw Hill Publication, 12th Edition, 2018, ISBN 978-9353163631.

Corporate Finance – II

Subject code: BM62203
Credit: 1.5-0-0.5-2

Prerequisite:

- Complete knowledge of CF-I discussed topics to understand the contents of CF-II better.
- Latest happening of the stock market and the financial performances of selected companies
- Students should have the basic excel functions to use it independently.

Introduction:

This course is an extension of the Corporate Finance – I that elaborates the detailed finance functions having an analytical perspective. Further. It discusses dividend decisions, capital structure theories and indicators of insolvency which are in present times has become a major decision-making area for a finance manager. Management students can work effectively in the finance function of an organization after studying this subject. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes:

After completion of the course, students can be able to

CO1: Describe the impact of leverage on profitability and performance of a company.

CO2: Understand the effective strategic financial decisions to value maximization of shareholders.

CO3: Examine and apply the impact of risks in long-term investment decisions.

CO4: Evaluate projects through sensitivity and scenario analysis.

CO5: Analyse whether to pay dividend using dividend pay-out theories and policies.

CO6: Estimate the working capital components and their effective management.

Detailed Syllabus:

Capital Budgeting Decision under risk- introduction to risk analysis in capital budgeting, methods of risk analysis in capital budgeting- certainty equivalence, risk adjusted discounting rates, simulation and sensitivity analysis, decision tree analysis etc.

Financing Decision (Capital Structure) - Capital structure decision, theories in capital structure, sources of long-term financing. Financing and investment decision linkage. Latest financing structures of few companies with industry data

Dividend Decision- dividend policies, dividend theories; Gordon Model, Walter Model, types of dividend-buybacks of shares, stock dividend, stock split. Optimum Dividend Decision: Linter Model; Latest dividend policies of few companies and analysis

Working Capital Management: working capital performance analysis of firms, working capital related ratio analysis, inventory management techniques, management of receivables and payables, management of cash methods and models, working capital financing options for companies. Latest working capital management of companies with industry performance data

Insolvency: Indicators of insolvency, Negative net worth, Altman Analysis, Insolvency in few Indian Companies; financial projection etc.

Global Experience in Corporate Finance

Textbook:

Principles of Corporate Finance, by Richard A. Brealey, Stewart C. Myers, Franklin Allen and Pitabas Mohanty, McGraw Hill Publication, 12th Edition, 2018, ISBN 978-9353163631.

Reference Books:

1. Financial Management: Theory and Practice by Prasanna Chandra; McGraw Hill, 2022, ISBN 978-9355322203.
2. Corporate Finance: Theory & Practice by Damodaran; Wiley, 2nd Edition, 2003, ISBN 978-0471283324.
3. Financial Management by IM Pandey, Vikas Publication, 12th Edition, 2021, ISBN 978-9390577255.
4. Lawrence J Gitman, Principles of Managerial Finance, Pearson Publication, 11th Edition, 2010, ISBN 978-8177585544.
5. Stephen A Ross, R W Westerfield, Jeffrey Jaffe and R K Kakani, Corporate Finance, TMH Publishing, 8th Edition, 2006, ISBN 978-0073337180.
6. Alan C Shapiro and S D Balbirer, Modern Corporate Finance, Pearson Education, 1999, ISBN 9780130800985.
7. Financial Management: Text, Problems and Cases, by M Y Khan and P K Jain, , TMH Publishing, 6th Edition, 2011, ISBN 978-0071067850.

Security Analysis & Portfolio Management

Subject Code: BM62205
Course Credit- 1.5-0-0.5-2
Prerequisite: Understanding of accounting and corporate finance

Introduction:

The Securities Analysis and Portfolio Management (SAPM) course focuses on introducing the students with various aspects of analysis of securities and managing the portfolio. The course will begin with Indian Securities Market and then gradually take the students through various technicalities of dealing with securities, related to its trading and risk- return estimation, etc. The Primary objective of this course is to familiarize the students with basic concepts of Securities Analysis and its various tools and techniques to facilitate them in managing the portfolio of different kinds of securities with varied level of risk and return. The course will help them to become an analyst and advisor to guide people to invest their money in different investment opportunities.

Course Outcomes:

After completion of the course, students can be able to

CO-1: Describe basic concepts of investments: financial market and financial instruments.

CO-2: Understanding Risk, return, portfolio and the theories of investment.

CO-3: Application of investment theories in real life situations

CO-4: Analyse the economy, industry and company through fundamental analysis and technical analysis.

CO-5: Evaluate various investment decisions and strategies.

CO-6: Designing a framework for investment for different types of clients.

Course Contents:

- **Introduction to security analysis**- Investment Concepts, Investment styles- passive and Active, Growth, Momentum &Value investing, asset classes- Physical Assets-Real Estate, Commodity, Gold, financial asset types including debt & equity, types of investors, investor psychology.
- **Indian Stock market: S**egments in the stock market- cash, derivative and debt, stock trading requirements- demat account, trading account, stock market operation, online trading and settlement process, NSE, BSE, stock market index and its measurement

- **Analysis of Fixed Income Securities** - valuation of bonds, Different bond yield and return measures.
- **Fundamental Analysis**: Fundamental factors for stock analysis, economic, industry and company analysis.
- **Technical Analysis**: Technical charts and patterns, technical indicators for stock analysis, technical analysis and forecasting of stock performance
- **Portfolio analysis & Selection**- Return and risk estimation for both stock & portfolio, optimum portfolio, efficient frontier. Beta, Capital Asset Pricing Model, CAL, SML, Markowitz Diversification model, optimal portfolio, efficient frontier & CML, Single, Multi & Industry Index Model.
- **Portfolio performance evaluation**- Arbitrage pricing model, Sharpe index, Treynor Index, Jensen's alpha, Information ratio, Fama's decomposition measure
- **Mutual fund performance**- Types of mutual fund, asset allocation and NAV calculation, MF performance evaluation
- **Efficient Market Hypothesis**- different forms of market efficiency, event study method

Textbook:

Bodie, Kane, Marcus & Mohanty, Investments, TMH, 11th Edition, 2019, ISBN 978-8194113850.

Reference Books:

1. Graham, Benjamin, Dodd, David, Security Analysis, McGraw Hill, 6th Edition, 2017, ISBN 978-0070140653.
2. Cunningham, Lawrence, The Essays of Warren Buffett: Lessons for Corporate America, Carolina Academic Press, 2015.
3. Damodaran, Aswath, Damodaran on Valuation: Security Analysis for Investment and Corporate Finance, Wiley, 2nd Edition, 2006, ISBN 978-0471751212.

International Financial Management

Subject Code: BM62207
Credit: 1.5-0-0.5-2
Prerequisite: Good understanding on macroeconomics

Introduction:

This course aims to develop an understanding of various international trade and financing concepts. In a globalized economic scenario, international trade and the financial system are important components of the business environment in which firms operate. The course will explore the implications of trade theories and financial markets for multinational companies and apply those concepts in business decision-making under a broad macroeconomic environment. Trade finance and its forms will be studied including the role of capital flows in an open economy. In order to make the course application-oriented solutions of various real-life cases are included in the pedagogy. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes:

After completion of the course, students can be able to

CO1: Understand the concept and nature of international capital and foreign exchange market.

CO2: Identify and appraise investment opportunities in the international environment.

CO3: Applying the environment of international finance and understanding and analysing the various sources of trade financing drawing its implications on international business.

CO4: Analyzing the nature and functioning of foreign exchange markets, determinations of exchange rates and interest rates and their forecasting.

CO5: Evaluate the trade practices, procedures, and documentation of international trade finance.

CO6: Develop strategies to deal with other types of country risks associated with foreign operations & above all, designing financial strategies in a global environment.

Course Content:

- **Module-1:** Introduction to International Financial Environment, A Snapshot of Theories of International Trade, Factor Movements and International Trade in Services and Balance of Payments

- **Module-2:** Exchange Rate System, Foreign Exchange Market, and Foreign Exchange Facilities and Regulations.
- **Module-3:** EXIM Operations and Documentation, EXIM Policy Framework, and International Trade Terms
- **Module-4:** Trade Financing, Export Payment Terms, Export Credit Risk Management, Customs Duty & Custom Clearance Procedure of Exports, and International Shipping Practices.
- **Module-5**: Investment Opportunities in International Market

Textbook:

Jeff Madura, International Financial Management, Cengage, 14th Edition, 2020, ISBN 978-0357130544.

Reference Books:

1. Dominick Salvatore, International Economics: Trade & Finance, Wiley, 11th Edition, 2014, ISBN 978-8126552344.
2. Alan C. Shapiro and Peter Moles, International Financial Management, Wiley, 2nd Edition, 2014, ISBN 978-1118929322.
3. Ram Singh, International Trade Operations, Excel Books, 2nd Edition, 2009.

Financial Reporting and Corporate Governance

Subject code: BM62210
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The course has been designed to cater to the needs of MBA graduates specializing in finance, to understand the necessity of fair and proper reporting of the health of the organization to all the stakeholders of the firm. The changing requirements of reporting due to developments in the corporate disclosure policies of companies make the course relevant for Finance students. They will understand the reporting framework as per Ind AS and IFRS to appreciate the similarities and difference between them. Besides, they will also be aware of the scams in corporate sector in spite of the regulatory framework and responsibility assigned on the management of a company. The course will equip them with knowledge in reporting desired in a global environment.

Course Outcomes

After completion of the course, students can be able to

CO1: Learn the importance of communicating financial information to different stakeholders.

CO2: Understand the difference between Indian and International Accounting System.

CO3: Apply financial information for effective communication with stakeholders.

CO4: Analyse corporate governance practices in the corporate world.

CO5: Evaluate the role of government in corporate governance.

CO6: Create framework for use of ESG in corporate governance.

Detailed Syllabus

Module1: Scope of financial statement analysis; financial statements and their relevance, objective of financial reporting and Indian Accounting Standards (IndAS) and International Financial Reporting Standards (IFRS)

Module 2: Components and format of Income Statement; Components and format of Balance Sheet, general principles of revenue recognition; revenue recognition in special cases; importance of fair value accounting; goodwill and how it is accounted for over time; contingent liabilities and accounting of contingent liabilities; inventory valuation, etc. and social and environmental accounting and reporting.

Module 3: Corporate governance (CG) and its historical perspective; issues in CG; Legal framework under Companies Act 2013; key stakeholders of a company; role of board of directors; role of auditors; whistleblowing in CG; whistleblowing process and benefits of whistleblowing policies; whistle-blower laws in India.

Module 4: Different roles of the government in an economy, public governance, and CG; importance and need for business ethics; roots of unethical behaviour; corporate ethical framework; CG issues in developed countries; problems faced by developing and emerging economies.

Textbook:

A.C. Fernando, K.P. Muraleedharan & E.K. Satheesh: Corporate Governance: Principles, Policies and Practices, Pearson, 3rd Edition, 2018, ISBN 978-9353062668.

Reference Books:

1. Jawahar Lal, Corporate Financial Reporting: Theory, Practice & Cases, Taxmann's 2009, ISBN 978-8171945245.
2. Asish K Bhattacharyya, Corporate Financial Reporting and Analysis, PHI, 2nd Edition, 2019, ISBN 978-9388028875.

Banking & Financial Services

Subject Code: BM62213
Credit- 1.5-0-0.5-2
Prerequisite- Nil

Introduction:

The banking system provides the backbone that supports the plethora of financial services firms and financial markets in any economy. In addition to financial intermediation, it provides a payment system to facilitate transactions, currency exchange and trade finance to facilitate domestic and international trade, and financial advisory to individuals and firms among other roles. The course aims to provide an overview of the role and function of banks –Deposit and Lending functions, payments & settlements with focus on digital transformation in banking & financial services, regulatory environment and risk management. The course will mainly focus on commercial banking in India. It will also introduce the students to other financial services such as investment banking, non-banking finance companies (NBFCs) - popularly known as shadow banking, micro-finance institutions (MFIs), insurance and asset management. The specific roles these financial intermediaries serve in the economy and the regulations covering their activities will be covered. The course will be taught with practical and contemporary industry relevant inputs and relevant cases available in HBS publishing.

Course Outcomes:

On successful completion of the course, the student shall be able to:

CO1: Understand the different constituents of the Indian financial system, their roles and functions and the regulatory arrangement.

CO2: Enhance his/her knowledge of banking industry, appreciate the role and functions of commercial banks, namely, deposit function, lending function, payment & settlement function, investment function and other miscellaneous/ancillary functions.

CO3: Apply the banking functionalities and interpret the performance, profitability, productivity, and efficiency of the commercial banks.

CO4: Analyse various types of risks associated with banking activities, explain the risk management and capital management functions of banks.

CO5: Evaluate other financial services such as investment banking, non-banking finance companies (NBFCs), micro-finance institutions (MFIs), insurance, asset management and alternative investments.

CO6: Develop models based on banking knowledge.

Course content

- **Indian Financial System:** Recent developments in Indian Financial System, Market Structure and Financial Innovation, RBI, SEBI, IRDA and their major functions; Role & Function of banks; Regulatory provisions; Enactments Governing Banks (Banking Regulation Act 1949, RBI Act 1935 etc.); Basic concepts of Retail banking, Wholesale banking, International Banking; Role and function of Money Market-CP; Importance of Risk Management in Banks (credit, market, liquidity, operational and Interest rate risk); Impact of Basel I, II & III & Capital Adequacy Ratio
- **Functions of banks:** Deposits, credits, ALM And risk management, payment and settlement,
- **Non-Banking Financial Companies (NBFCs)** – Types of NBFCs and their regulatory framework; Asset finance, gold loans, housing finance, infrastructure finance, real estate finance, loans against securities, vehicle finance and Micro Finance Institutions (MFIs)
- **Financial Services:** Merchant banking and investment banking services, Insurance services, Asset Management, Mutual Funds, Venture Capital and Private Equity, Alternate Investment Fund and Hedge Funds and Other Financial Services

Textbook:

Modern Banking Theory and Practice, Muraleedharan, D., PHI,2nd Edition, 2014, ISBN 978-8120350328.

Reference Books:

1	Indian Financial System	Pathak, Bharati	Pearson Education
2	Financial Services	Kahn	Tata McGraw Hill
3	Financial Services and Systems	Sasidharan, K	Tata McGraw Hill
4	The Financial System in India	Das, S. C	PHI Publications
5	Banking Principles and Operations	Gopinath, M.N.	Snow White
6	Introduction to Banking	Iyengar, Vijayaraghavan	Excel Books

Mergers, Acquisitions & Corporate Restructuring

Subject code: BM62206
Credit: 1.5-0-0.5-2

Prerequisite:

- Complete knowledge of corporate finance topics to understand better the corporate financial performances.
- Business valuation models to evaluate standalone firms.
- Latest happening in the field of merger & acquisitions and corporate restructuring of corporate in India and abroad
- Students should have the basic excel functions to use it independently.

Introduction:

The course includes the M&A legal framework, concepts of valuation, modes of squaring merger deals, etc. Studying and learning the different aspects of mergers and acquisitions will help in understanding the intricacies of the deals happening all over the world. The pedagogy of this course includes a wide range of literature and cases on mergers and acquisitions and other forms of corporate restructuring including insolvency and bankruptcy code (IBC). The combination of lectures and case discussions will enhance knowledge and maturity of judgment with respect to M&A decisions. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes:

After completion of the course, students can be able to apprehend the following:

CO1: The corporate growth and strategies (expansion and diversification) through mergers, acquisitions, and divestments including the motives.

CO2: Create a good understanding of valuation methods and issues pertaining to M&A activities.

CO3: Familiarize participants with target selection, swap ratio estimation and integration issues.

CO4: Students can learn the financing options in M&A- LBO & MBO

CO5: Sensitize participants to various forms of corporate restructuring including the latest insolvency and bankruptcy code (IBC) 2016

CO6: Understand the strategies and process of cross boarder M&A

Detailed Syllabus:

Introduction to M&A-Strategic & Economic Aspects of M&A, merger terminology, types & forms of M&A, merger waves in India and abroad

M&A Process- Demergers, steps in M&A process, role of Investment Bankers/ financial advisors, Management & shareholders at various stages of a deal, due diligence Process, deal estimation including swap ratio.

Merger Motive; value creation in merger deals; merger as a business strategic decision, economic aspects of merger, corporate governance, and merger decisions

Indian takeover code- tax, regulatory framework for M&A, Accounting for M&A in India

Growth & Value creation: Valuation of M&A Deal-Various approaches to valuation, synergy valuation methods, pre-merger standalone valuation, value of control

Hostile takeovers and Defensive tactics: hostile takeover and the pre and post hostile takeover defense strategies

M&A financing- Leveraged Buyout, management buyout and other methods of merger financing

Post-Merger performance- post merger performance audit, literature study on performance after merger deals, successful and failure deals.

Corporate Restructuring- types of corporate restructuring- internal & external corporate restructuring; Insolvency and bankruptcy code 2016. Indian case discussion on IBC

Latest trends in merger and corporate restructuring in India and abroad

Textbook:

Takeovers, Restructuring and Corporate Governance by J Fred Weston, Mark L. Mitchell and J Harold Mulherin, Pearson Education (New Delhi), Fourth Edition, 2003, ISBN 978-0131407374.

Reference Books:

1. Merger, Acquisition, and Corporate Restructuring (Text and cases), Edited by Chandrasekhar Krishnamurti & Vishwanath S R, Sage Publication, 2nd edition, 2018, ISBN 978-9352803491.
2. Mergers, Acquisitions and other restructuring activities-by Donald M DePamphilis, Academic Press, 9th Edition, 2018.
3. Sudi Sudarsanam, 2003 Creating Value from Mergers and Acquisitions: The Challenges. Prentice Hall International, 2003.
4. Damodaran, A, Investment Valuation: Tools and Techniques for Determining the Value of any Asset, Wiley, 3rd Edition, 2012, ISBN 978-1-118-01152-2.

Project & Infrastructure Finance

Subject Code: BM62218
Credit: 2-0-0.5-2
Prerequisite: Nil

Introduction:

Project finance is used to finance trillions of rupees of capital-intensive infrastructure projects annually. This increasingly critical financial technique relies on the cash flows of a specific infrastructure project not the cash flows of a corporation or third-party guarantor to service debt and provide investor returns. Not all projects can support project financing. Project finance is a specialized financial tool requiring both proper structuring and risk mitigation. The purpose of the course is to understand what project finance is, why it is used and how it is used. Public-Private Partnership (PPP) is an important model of infrastructure project finance in India, and its success depends on the clear demarcation of the role of the private and public sectors. Learning the essential elements of structuring such projects is a major takeaway from this course.

Course Outcomes:

After completion of the course, students can be able to

CO1: Understand essential difference between project finance and corporate finance.

CO2: Learn key features of different infrastructure sectors viz. power, telecom, roads, airports, hospitality, logistics, healthcare etc.

CO3: Apply the necessary elements that support the use of project finance, viz. contractual agreements, technology sponsors, risk identification and mitigation, sources of capital, financial structuring, and the use of financial modelling, accounting considerations, and tax considerations.

CO4: Analyse the role of different parties involved in the execution of infrastructure projects.

CO5: Evaluate the role of government in facilitating execution of such projects.

CO6: Formulate and Design model of financial investment and return for large projects.

Course content

- **Introduction to Project Finance:** What is project finance; Project Finance vis-à-vis Corporate Finance; Project Planning and Analysis – key elements of project planning, statutory approvals; typical timeline and milestones in a project.

- **Infrastructure projects and their financing in India:** Classification of infrastructure projects, Procurement of infrastructure projects through Public Private Partnership route-Types of PPP models – BOO, BOOT, BOLT etc.; Contractual structure of PPP projects, Value for money evaluation, Lifecycle of PPP projects, PPP procurement process
- **Project evaluation I**: Estimating the cost of the project, market demand and revenue projection; assumptions/market study/contractual nature of revenue projection; future cash flow estimation.
- **Project evaluation II:** Financial structuring of projects – debt and equity; designing security arrangements, waterfall mechanism for payments in the post completion phase; analyzing project viability; project risk analysis (risk identification techniques, risk allocation frameworks, risk mitigation strategies); political risk and discount rate adjustment; and Viability Gap Funding (VGF)
- **Project evaluation III:** Rate of Return (project IRR), scenario analysis & stress testing impact on IRR and Social Cost Benefit Analysis
- **Issues in infrastructure financing/investment** – Sources of infrastructure financing, public and private finance, public guarantees (NIIF), role of banks and infrastructure finance companies, post completion financing structures (InvIT), etc.

Textbook:

Cappels, Thomas M, Financially Focused Project Management, J Ross Publications, 2003

Reference Books:

1. Machiraju, H.R. Introduction to Project Finance, Vikas Publications, 1st Edition, 2001, ISBN 978-8125910107.
2. Chandra, Prasanna, Projects: Planning, Analysis, Selection, Financing, Implementation & Review, TMH, 9th Edition, 2019, ISBN 978-8194113836.

Derivatives & Risk Management

Subject Code: BM62208
Credit: 2-0-0.5-2
Prerequisite: Nil

Introduction:

This course aims to sensitise and teach one of the most important segments of financial market i.e., Derivatives. Students will not only learn the different aspects of risk management but also learn how to use derivative products to mitigate

the financial risk of firms. Students with good understanding and knowledge of derivatives would be able make lucrative careers in finance. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major advanced concepts of risk management.

CO2: Understand the importance of derivative markets in risk management.

CO3: Apply the understanding of derivative products in practical problems such as risk management, and investment.

CO4: Analyse real-life case studies and solve those to derive optimum solutions.

CO5: Determining the price/value of different derivative products, and

CO6: Develop critical thinking ability supported by the learned concepts of derivative and risk management.

Course Content:

- **Introduction to Derivatives** - Meaning of Derivative, Insurance vs. derivatives, types of derivatives Instruments (Forwards, Futures, Swaps, and Options), Types of derivative traders (Hedger, Speculator, and Arbitrageur), Economic Functions of Derivative- Price Discovery and Risk Management Use and Misuses of Derivatives.
- **Derivative Market -** Size of Derivative Market, Exchange Traded Derivative Market, Over the Counter Derivative Market, Participants in the Derivative Market, Trading and Settlement Mechanism
- **Fundamentals of Forward and Future Contract -** Meaning of Forward and Future Contract, Pricing of forward and future contract, Value of forward and future contract, Pricing Model- Cost of Carry Model, Short Selling, Stock Index, Index Arbitrage, Futures and Forwards on Currencies
- **Hedging with Forward and Futures -** Why Hedge, Hedging Concepts, Basis Risk, Hedging Strategies - Long hedge, short hedge and cross hedging, Determination of Optimal Hedge Ratio, Optimal Number of Contracts, Hedging using Index Futures.
- **Interest Rate Derivative -** Types of rates, Continuous Compounding, Zero Rate, Bond Pricing, Par Yield, Forward Rates, Forward Rates Agreement, Liquidity Preference Theory. Forward Rate Agreements, Interest Rate Futures, Markets for Interest Rate Derivatives, FRAs in Hedging, Application of Interest Rate Futures- Long Hedge, Short Hedge, Pricing a Treasury Bill Future

- **Currency Derivative -** Exchange rate Regime and Forex Market in India, Foreign Exchange Rate, Forex Risk, Rupee Forwards, Foreign Exchange Futures and Options, Hedging with Foreign Exchange Future and Option**.**
- **Swaps -** Meaning and Structure of Swap, Types of Swap, Market for Swap Contacts, The comparative advantage argument, Using Swap Rates to Bootstrap the LIBOR/Swap Zero Curve
- **Interest Rate & Currency Swap -** Structure of Interest Rate Swap, Pricing and Valuation of Interest Rate Swap, Interest Rate Swap Strategies. Structure of Currency Swap, Pricing and Valuation of Currency Swap, Currency Swap Strategies
- **Option Contracts -** Meaning of Option Contract, Development of Option Market, Types of Option Contracts- Call Option, Put Option, Concept of ITM, ATM and OTM. Exchange Traded Vs. Over-the-Counter Options Market, Mechanics of Option Trading, Option Price Quotations
- **Principle of Option Pricing -** Basic notations and terminologies, Put – Call Parity, Principle of Call Option Pricing and Principle of put Option Pricing. Pay-off of Option Contract. Trading Strategies Using Options **-** Principal Protected Notes, Spreads, Combinations.
- **Option Pricing Models - The Binomial Model –** Concept of Risk Neutral Arbitrage, One- Period Binomial Model, Two Period Binomial Model, The Black- Scholes-Merton Model - Assumption of BSM Model, Factors in The BSM Model, Estimating the Volatility- Concept of Implied Volatility, Valuation of Call and Put Option.
- **Credit Derivatives -** Credit Default Swap (CDS), CDS Structure, Types of CDS, ABS, CDO, Synthetic CDO
- **Corporate Risk Management with Derivative –** Structure of Risk Management in a Corporate, Impetus for Risk Management, Benefits of Risk Management, Managing Market Risk- Value at Risk (VaR).

Textbook:

John C. Hull, Options, Futures, and Other Derivatives, Pearson, 10th Edition, 2018, ISBN 978-9352866595.

Reference Books:

1. Kumar, S.S.S, Financial Derivative, Prentice-Hall, 2007.
2. Sheldon Natenberg, Option volatility and pricing strategies, Wiley, 2nd Edition, 2014, ISBN 978-0071818773.

Business Analysis and Valuation (BAV)

Subject Code:BM62209
Credit: 1.5-0-0.5-2

Prerequisite:

- Complete knowledge of corporate finance topics to understand better the corporate valuation process.
- Basic understanding of financial statement analysis
- Students should have the basic excel functions to use it independently.

Introduction:

Arriving at the value of a business or a group of business assets requires an analysis and weighing the value drivers. The value drivers include- tangible & intangible elements and factors that are within the management control or not. Under this context, the structure of this course comprises the necessary steps followed for business and equity valuation process. The course pedagogy mainly includes case bases learning, where multiple real business classic cases are drawn from Harvard Business School publishing.

Course Outcomes:

After completion of the course, students can be able to apprehend the following:

CO1: Describe the value drivers and inputs for both business and equity valuation.
CO2: Understand how equity and assets are to be valued with alternative models.
CO3: Analyse how companies are valued including the private companies.
CO4: Apply the qualitative and quantitative factors included in valuation process.
CO5: Evaluate the inclusion of intangibles in the valuation process.
CO6: Use latest trends in business and equity valuation.

Detailed Syllabus:

Introduction to valuation- valuation purpose, analysing financial statements and Identifying Value Drivers, Strategic analysis in business valuation, valuation input and output relationship, valuation principles, business and equity valuation process.

Discounted Cash flow (DCF) valuation Approach-Valuation inputs and process, cash flow, growth, terminal value, levered and un-levering of equity betas, discounting rate in DCF valuation, CCF Method of Valuation, APV Methods of Valuation, WACC & EVA. Latest real data of companies used to determine the business and equity value using DCF technique.

Relative Valuation- value multiples, comparable identification process, Private company valuation, Liquidation valuation, Sum-of-the parts valuation. Latest real data used for application of relative valuation of both equity and business valuation.

Real Option valuation- The Contingent Claim (Real Option) Approach to Valuation, black Scholes option pricing model

Other Specific Valuation Cases- Brand and Intangible Valuation, Cross Boarder Valuation, Valuing the control; specific company valuation-subscription based firm valuation, social media company valuation etc.

Textbook:

Damodaran, Aswath, Damodaran on Valuation: Security Analysis for Investment and Corporate Finance, Wiley, 2nd Edition, 2006, ISBN 978-0471751212.

Reference Books:

1. Valuing A Business: The Analysis and Appraisal of Closely Held Companies by Pratt Shannon, 5th Edition, McGraw Hill, 2008, ISBN 978-0071441803.
2. Business Analysis and Valuation: Using Financial Statements, Text and Cases, Healy and Palepu, Cengage publication, 5th Edition, 2015, ISBN 978-8131526644.

Management Control System

Course Code: BM62217
Credit: 1.5-0-0.5-2
Prerequisite: Understanding on Management accounting

Introduction:

The course gives the students ample of opportunities to apply the knowledge acquired in the first year of their MBA programme. The focus of the course is strategy implementation. The knowledge of core functional courses can be applied in the course through cases related to multinational companies. This course has been designed to allow students to gain knowledge, insight, and analytical skills to design and implement the ongoing management system that is used by corporation's executives to plan and control the firm's performance. This course gives hands on experience of strategic planning; budgeting; resource allocation; performance measurement, evaluation, and reward; responsibility centre allocation etc. The knowledge of Management Accounting is a pre-requisite for this course. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes:

At the end of the course students will be able to:

CO1: Describe strategy formulation and its role.

CO2: Understand the need of changes in organizational strategies in the changing business environment to achieve the strategic ambitions of the organization.

CO3: Apply the fundamentals of Management control systems and the necessity of fixing the accountability and measuring the performance of various responsibility centres so that it will align with the organizational goals.

CO4: Analyse the importance of strategic planning and accordingly allocation of resources through budget and keeping a control over the whole exercise through performance evaluation of responsibility centres.

CO5: Evaluate the accounting standard in management.

CO6: Create strategy formulation and implementation in companies to achieve the business goal based on the vision of the company.

Course Content:

- **Introduction to Management control system**-Boundaries of Management control, Strategy formulation, Management control and Task control
- **Understanding strategies**- Goals, Corporate-Level strategy, Business Unit level strategies (BCG Matrix, G E Model), Strategic Planning, strategic planning process
- **Organizations Goal congruence**- forms of systems, types of organizations, business segmentation and organization goal congruence
- **Responsibility centres**- types of responsibility centres- Revenue, Expense, Investment and Profit centres
- **Organization Performance Measurements**- ROI measure, EVA, and other measures of 3. organization performance evaluation, management compensation
- **Transfer pricing**- Indian laws and issues pertaining to transfer pricing in different industries.
- **Budgetary control system-** significance of budget as a measure of control system**,** behavioural aspects and quantitative techniques used in budget preparation, budgetary control.
- **Financial performance report**- analysis of financial performance report as a control system.

Textbook:

Anthony and Govindarajan, Management Control Systems, McGraw Hill, 12th Edition, 2017, ISBN 978-0070635838.

Reference Book:

Maciariello, Joseph A., and Kirby, Calvin J., Management Control Systems, Pearson, 2nd Edition, 1994, ISBN 978-0130981462.

Financial Time Series & Analysis

Subject Code: BM62215
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The financial decision-making process involves analysing historical data to identify the trend and forecasting the next possible outcomes. This analysis is performed with application of numerous econometric models. Financial time series and analysis is the course designed to apply the econometric models with time series data obtained about the companies. The participants will gain practical knowledge in business analytics that helps in understanding the insights of corporate problems. As career in finance focus more towards financial modelling and financial analytics, this course will be immensely helpful to students in their career growth. The course will be dealt with the real data obtained from CMIE database, Stock market and analyse with excel and other econometric packages.

Course Outcomes:

On completion of the course, students will be able to:

CO1: Ability to understand financial modelling tools and techniques.

CO2: Analyse the various factors which will have impact on business decisions.

CO3: Apply practical training in different time series methods.

CO4: Evaluate the impact of various macroeconomic factors on the stock market.

CO5: Analyse real-life case studies and solve those to derive optimum solutions, and

CO6: Develop critical thinking ability supported by the learned concepts of time series econometrics.

Course Content:

- Introduction to Financial Time Series. Distinction between Time series and Cross-sectional data, Understanding the basic concept of a Time series, Application of linear regression model to time series data.
- Financial Time Series and their characteristics. Asset returns, Distributional properties of returns, Multivariate returns
- Linear Time Series Analysis and Its Applications. Stationarity, White noise and Linear Time series, Correlation and Autocorrelation, Simple ARMA Models, Seasonal Models, Long memory models and Fractional differencing
- Conditional Heteroscedastic Models. Characteristics of Volatility, Model building and testing of ARCH effect, GARCH family models, Use of High frequency data, Forecasting through GARCH Models
- Multivariate Time series. Vector Auto regressive models, Vector ARMA models, Impulse response function, Threshold co-integration and arbitrage
- Factor Models. Concept of Factor models, Macroeconomic factor models, Fundamental factor models

Textbook:

Ruey S.Tsay, Analysis of Financial Time Series, Wiley, 3rd Edition, 2010, ISBN 978-0-470-41435-4.

Reference Book:

1. Walter Enders, Applied Econometric Time Series, Wiley, 3rd Edition, 2013, ISBN 978-8126543915
2. Anderson, The Statistical Analysis of Time Series, Wiley, 1971, ISBN 978-0471029007.

Risk Management in Banks

Subject code: BM62212
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The course is designed to provide a comprehensive understanding of the various types of risks – credit, market and operational risks – faced by the banks and how they manage these risks. An understanding of the risk management process – how are risks identified, quantified, and controlled will help students learn about the

need to regulate banks and the regulatory mechanism in place to control banking risk. They will also learn the importance of Asset Liability Management (ALM) and the techniques to manage interest rate risk and liquidity risk.

Course Outcomes:

On completion of the course, students will be able to:

CO1: Learn about different types of risk exposures of a bank.

CO2: Understand the importance of and methods to assess these risks, i.e., measure these risks and calculate the capital requirement of these risks.

CO3: Apply different types of risk management techniques such as use of financial derivatives and ALM to manage risk.

CO4: Analyse data requirements and use of alternate analytical models to quantify risks.

CO5: Evaluate the risk-based performance of banks.

CO6: Create risk management practices and processes in a banking organization.

Course Content:

Introduction to risk management in Banks- Risk management concept and the importance of risk management; definition of the various risks faced by a bank – Credit Risk, Market Risk, Operational Risk, Interest Rate Risk, Liquidity Risk, Asset Liability Management (ALM), and Concentration Risk; description of the risk management functions in a bank.

Risk management process in a bank and regulatory approach to risk management – Identification of risks; risk quantification; risk policy formulation; risk management strategy formulation and risk monitoring. Basel I, II and III norms and its adoption by RBI.

Liquidity risk & interest rate risk (banking book) – What is liquidity and sources of liquidity, relationship of liquidity risk to other banking risks; liquidity risk and Asset Liability Management (ALM). Definition of interest rate risk in banking book and its measurement – Gap analysis model; duration model; mitigation methods – price matching and maturity matching

Market Risk Management – Market risk and its types; measurement of market risk; risk metrics; Daily Earnings at Risk (DEaR) and Value at Risk (VaR); different approaches to measurement – historical simulation approach, the Monte Carlo simulation approach and parametric VaR Method; Managing Market Risk – New Basel Capital Accord and application to Financial Derivatives

Credit Risk Management- sources of credit risk information, asset classification, measures of credit risk, estimation of credit losses; tools of credit risk mitigation/ management techniques/models; accounting treatment

Operational Risk Management- Building block for Enterprise Risk Management (ERM), operational risk measurement and management techniques/models

Other topics – 2008 Financial Crisis and its impact**: i**nnovations in financial markets; failureof risk assessment; interbank liquidity; regulatory changes post crisis economic capital, risk adjusted performance measurement; risk-based pricing, use of financial derivatives to mitigate risk, credit derivatives.

Textbook:

Hennie van Greuning & Sonja Brajovic Bratanovic, Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management, World Bank, 4th Edition,2020, ISBN 978-1-4648-1446-4.

Reference Books

1. Anthony Saunders & Marcia Millon Cornett, Financial Institution Management-A Risk Management Approach, McGraw Hill, 9th edition, 2017, ISBN 978-1259717772.
2. Joel Bessis, Risk Management in Banking, Wiley, 3rd Edition, 2009, ISBN 978-0470019139.
3. Theory and Practice of Treasury and Risk Management in Banks, IIBF Mumbai, Taxman.

Fixed Income and Alternative Investments

Subject code: BM62214
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

Fixed income securities are popular among investors for its assured return. Further, most of those instruments are presently traded in the market providing liquidity to the investors. Investment in Real estate, commodities, hedge funds and private equity is also gaining momentum as alternative avenues of investment against stocks and bonds. Students should acquire knowledge in this emerging area to work effectively in the financial market. The course is designed to provide knowledge on these products and their valuation.

Course Outcomes:

On completion of the course, students will be able to:

CO1: Learn the key concepts of the basic fixed income instrument – bonds.

CO2: Understand the concepts of fixed income and alternate investment securities.

CO3: Apply the concepts of yield curve, credit spreads, optionality, and risks to value such securities.

CO4: Measure and analyse the yield sensitivity of a bond by using duration and convexity.

CO5: Evaluate the trends in interest rate movements and their implications for fixed income markets.

CO6: Create investment portfolios with desired risk characteristics.

Course Content:

Fixed Income Securities: Nature and characteristics of fixed income securities, bond indenture, covenants in bond issue, different kinds of bonds, bonds with embedded options, cash flow structure of a bond, bonds with contingencies, global fixed income market, fixed income indices, investors in fixed income securities, primary and secondary bond market, sovereign bonds, corporate bonds, short term financial arrangements, credit rating mechanism.

Valuation of Fixed Income Securities: Bond Pricing, Yield to Maturity, Yield Curve, Computing forward rates, Relationship between Spot and Forward rates, Swap rates, Term structure of interest rates: The Cox-Ingersoll-Ross (CIR) Model, Arbitrage-Free Models, Yield curve factor model, Monte Carlo Method; Interest rate trees.

Hedge Funds, Private Equity and Commodities: Hedge fund strategies, hedge fund valuation, Private Equity: Leveraged Buyout, Venture Capital, strategies and consideration in private equity investment. Commodities: Commodities Derivatives, Prices of Commodities, Pricing of commodities future contracts.

Real Estate and Infrastructure: Real Estate Investment: Characteristics, types, risk, benefits; Valuation of Real Estate: Income Approach, Capitalization method, DCF Method, Cost Approach, Infrastructure Investment; REITs and InvIT

Regulatory issues and Due Diligence in Alternative Investments

Textbook

M. Kannadhasan: Fixed Income Securities: Valuation and Risk Management, Cengage, 1st Edition, 2022, ISBN 978-9390555536.

Reference Books:

1. Frank J. Fabozzi, Bond Markets: Analysis and Strategies, Pearson, 8th Edition, 2012, ISBN 978-0132743549.
2. Frank J. Fabozzi, The Handbook of Fixed Income Securities, McGraw Hill, 8th Edition, 2012, ISBN 978-0071768467.
3. Prasanna Chandra, Investment Analysis and Portfolio Management, McGraw Hill, 6th Edition, 2021, ISBN 9789354600074.
4. Donald R. Chambers , Keith H. Black , et al. Alternative Investments: A Primer for Investment Professionals, CFA Institute, 2018, ISBN 10-1944960376.

Financial Markets and Regulation

Subject Code: BM62211

Credit: 1.5-0-0.5

Prerequisite: Nil

Introduction:

The course introduces the general concepts of financial markets and how these markets are regulated. This course will provide an understanding of the functions, and operations of the financial markets and institutions operating in India. It explains the role of financial system on economic development. Various conceptual issues related to risk and return, the role of regulatory bodies, mechanism of commercial banking, operations of insurance companies and mutual funds are discussed elaborately. It also describes the importance of small savings, provident funds, pension funds and credit rating agencies. The course provides a comprehensive overview and systematic evaluation of the mainstream markets of various financial instruments such as call money, bond, stock, derivatives and exchange rate. The subject will be discussed with the help of classic and latest cases available in HBS publishing.

Course Outcomes:

At the end of the course, the students will be able to

CO1: Learn the characteristic features of the key financial markets – equity, debt, foreign exchange, etc,

CO2: Understand the relationship between risk and return of financial instruments traded in the markets,

CO3: Appreciate the role of the financial markets in the economic development of a country (India)

CO4: Learn the impact of the policies of the central bank on financial markets.

CO5: Appreciate the role of regulators in ensuring transparency in financial markets.

CO6: Develop critical thinking ability supported by the learned concepts of Financial Markets.

Course Contents:

- **Introduction to Financial System and Economic Development:** Economic role of financial markets; Indicators of Financial Development; Regulatory institutions
- **Concepts Related to Financial Markets and Institutions:** Risk – return relationship; Asset Pricing Models; Valuation of Assets
- **Theories of Level and Structure of Interest Rate:** Factors affecting interest rates; Impact of Monetary Policy, Duration & Convexity; Zero Coupon Yield Curve
- **Financial Regulations and Regulatory Institutions in India:** Economics of regulation of financial markets; Role of RBI, SEBI, IRDA, and PFRDA; Operating Procedures of Monetary Policy; Corporate Governance and SEBI
- **Financial Market Participants:** Commercial Banks; Provident Funds, Pension Funds, Insurance Companies; Mutual Funds, Venture Capital Funds, Hedge Funds and other Collective Investment Schemes
- **Money Markets in India:** Call Money Market, Treasury Bill, Commercial Paper, Certificate of Deposit
- **Bond Market:** Bonds and Debentures; Bond Features, including embedded options; Bond Price Volatility; Government Security Market; Corporate Bond Market; Credit Rating and Price of Bonds
- **Classification of Stock Market and Securities**; Stock Exchanges; IPO and FPO; Stock Market Indices; Market Micro-Structure in Stock Market
- **Commodity Derivatives:** Contract types, Commodity Futures; Market micro-structure; Limitations of Indian commodity markets
- **Foreign Exchange Market:** Foreign Exchange Market Structure; Risk Management in Foreign Exchange Market; Exchange Rate Determination; Foreign Capital – FDI & FII; Central Bank Intervention in Foreign Exchange Market; Futures, Swaps and Options in Foreign Exchange

Textbook

Jeff Madura, Financial Institutions & Markets, Cengage Publication, 10th Edition, 2014, ISBN 978-8131525272.

Reference Books:

1. Frederic Mishkin and Stanley Eakins Financial Markets and Institutions, Pearson Education, 9th Edition, 2018, ISBN 978-1292215006.
2. L.M. Bhole and J. Mahakud, Financial Institutions and Markets: Structure, Growth and Innovations, McGraw Hill, 6th Edition, 2017, ISBN 978-9352605415.
3. R. Stafford Johnson, Bond Evaluation, Selection and Management, John Wiley and Sons, 2nd Edition, 2010, ISBN 978-0470478356.
4. Frank Reilly and Keith Brown, Analysis of Investments and Management of Portfolios, Cengage, 10th Edition, 2012, ISBN 978-8131518748.

Quantitative Finance using R

Subject Code: BM62219
Course Credit: 1.5-0-0.5-2
Prerequisite- Nil

Introduction:

The quantitative finance is a field of applied quantitative techniques concerning the financial market and corporate finance. The course includes numerous mathematical models and tools for financial analytics. In the age of automation and artificial intelligence, the financial data analysis is paramount with development of sophisticated packages like R and Python. In view of the recent demand and advancement of finance domain, this course focuses to cover the financial data analysis using R package. The course starts with the finance preliminaries and further includes the basic mathematical and excels applications in finance. The advance analytical tools in R package and the machine learning application in finance are the focal point of the course.

Course Outcomes:

On completion of the course, students will be able to:

CO1: Understand Data structure in financial market and corporate finance.

CO2: Learn about Seminal works in finance and its application with real time data.

CO3: Excel application in investment decision

CO4: Financial data analysis using R-package.

CO5: Evaluation of Data

CO5: Formulation & usage of machine learning techniques in financial decision making.

Course content

- **Module 1:** Quantitative Finance Preliminaries- data analysis methods in investment finance and corporate finance, use of discounting and compounding methods, valuation methods, Pro-forma financial statement modelling, mean and variance (single & portfolio), variance & co-variance matrix, efficient portfolio, market models including single factor and three factor models, beta estimation, security market line; market and corporate finance forecasting; other preliminary model and concepts of quantitative finance.
- **Module 2:** Financial Modelling in Excel- - excel functions for data screening, macros, vlookup functions, statistical functions in excel, excel VBA and random number generator, data tables and other basic excel applications in finance. In addition to the basic mathematical functions, modern spreadsheets provide built-in functions for common financial and statistical operations; types of charts (e.g., scatter diagrams, forecast charts, error patterns, and downside risk curves).
- **Module 3:** Introduction to R application in finance- financial data structure and R functions in data loading, data screening and charting & plotting of financial data for analysis; excel and R integration in data transfer; forecasting tools in R- advanced tools like EGARCH & VGARCH etc., back testing, volatility forecasting; event study in finance; portfolio optimization, asset pricing models- capital asset pricing & arbitrage pricing models; risk management- Value at risk, parametric VaR, historical VaR, derivative pricing models- black scholes model, binomial models; econometrics and wavelet analysis and other advanced time series models.
- **Module 4:** Financial Machine Learning- application of machine learning methods using real life financial data- logistic regression and neural network, deep neural network, K means algorithm, K nearest neighbourhood, support vector machine; decision tree, random forest. Back testing with cross validation, training and testing of data; and other applications of machine learning in financial data.

- **Module 5:** Dataset Analytics and Risk Measurement-Data Exploration using Fundamentals. Technical analysis. Gauging the market sentiment. Simulating Trading Strategies. Pairs Trading. Markowitz Mean-variance optimization.

Textbook

Simon Benninga and Tal Mofkadi, Financial Modelling, MIT Press Publication, 2022, ISBN 9780262046428.

Reference Books

1. Härdle, W., Kleinow, T., Stahl, G, Applied Quantitative Finance: Theory and Computational Tools, 1st Edition, 2013, ISBN 978-3540434603.
2. Stephen Blyth, An introduction to Quantitative Finance, Oxford University Press, 2014, ISBN 978-0199666591.
3. Marcos Lopez de Prado, Advances in Financial Machine Learning, Wiley, 2018.
4. Mark J. Bennett, Dirk L, Financial Analytics with R, Cambridge University Press, 2016, ISBN 9781316584460.

Pricing Management

Subject Code: BM62318
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction:

Pricing is one of the most important but least understood marketing decisions. Thus, the necessity, a) to learn and practice concepts, techniques, and get to grips with the latest thinking on assessing and formulating pricing policies, and b) analyse how firms attempt to capture value, as well as profits, in the revenues they earn. How much should an organization charge for a new product? Can pricing performance be improved for existing products? Setting the right price for a product or service is not easy. Pricing decisions can have a significant and often immediate effect on an organization's bottom line, yet there is much confusion about how best to determine and execute a successful pricing policy. This course is designed to demystify the science behind purchase behaviour and provide participants with a logical and systematic approach to crafting an optimal price structure.

Course Outcomes:

On completion of the course, students will be able to:

CO1: State the six elements of pricing – value creation, value communication, pricing structure, pricing policy, price setting and price competition.

CO2: Explain the six-pricing element with examples.

CO3: Set prices for a given offer considering the pricing elements.

CO4: From given contexts/ case studies, identify pricing consistencies/ inconsistencies.

CO5: Determine a profile of pricing using the Van Westendorp Price model for a given product.

CO6: Defend your/ decision maker's pricing decision after due evaluation.

Course Contents:

- Value cascade: Value creation & communication, price structure, pricing policy, pricing level & price competition
- Value creation: The Source of Pricing Advantage, The Role of Value in Pricing, Estimate Economic Value, Value-Based Market Segmentation.
- Value communication: Adapting the Message for Product Characteristics, Strategies for Conveying Value, Multiple Participants in the Buying Process
- Pricing structure: Offer Configurations, Price Metrics, Price Fences, Peak Pricing and Yield Management
- Pricing policy: Policies for: Different Buyer Types, Dealing with Power Buyers, Successfully Managing Price Increases, Leading an Industry-Wide Increase, Transitioning from Flexible to Policy-Based Pricing
- Price setting: Define the Viable Price Range, Make Strategic Choices, Assess Breakeven Sales Changes, Gauge Price Elasticity, Account for Psychological Factors
- Managing conflict in pricing: Understanding the Pricing Game, Competing to Grow Profitably, Reacting to Competition: Think Before You Act, Managing Competitive Information, Collect and Evaluate, Competitive Information, Selectively Communicate Information, When Should You Compete on Price?
- Research techniques for pricing management: Types of Measurement Procedures, Experimentally Controlled Studies of Actual Purchases, Uncontrolled Studies of Preferences and Intentions

- Pricing and product life cycle: Pricing an Innovation, Price Reductions in Growth, Pricing the Established Product in Maturity
- Organizing for effective pricing management: Creating Alignment on Pricing Objectives, Matching the Extent of Pricing Centralization with Organizational Needs, Decision Rights Specify Pricing Roles and Responsibilities, Pricing Processes to Ensure Successful Strategy Implementation, Performance Measures and Incentives: Aligning Sales Incentives with Strategy
- Managing Export Prices in Foreign Currencies, Foreign Market Sales Strategy, Competitive Impact of Exchange Rate Shifts, Four Generic Strategies for Managing Exchange Rate Price Adjustments

Textbook

Thomas T. Nagle & Georg Müller, The Strategy and Tactics of Pricing, Routledge, 6th, 2018, ISBN: 113873750X.

Reference Books

1. Robert M. Schindler, Pricing Strategies: A Marketing Approach, SAGE, 1st Edition, 2012, ISBN – 1412964741
2. Peter Hill, Pricing for Profit: How to Develop a Powerful Pricing Strategy for Your Business, Kogan Page, 1st Edition, 2013, ISBN – 0749467673
3. Jagmohan Raju & Z. Zhang, Smart Pricing: How Google, Priceline, and Leading Businesses Use Pricing Innovation for Profitability, FT Press, 1st Edition, 2010, ISBN - 013149418X.

Behavioural Finance

Subject Code: BM62216
Credit: 1.5-0-0.5-2
Prerequisite: NIL

Introduction:

Behavioural finance recognizes that our abilities to make complex financial decisions are limited due to the biases and errors of judgment to which all of us are prone. This course introduces cognitive, emotional biases, discusses the impact of such biases on financial decision-making, and explores the behaviour of individual investors, fund managers, and corporate managers. This course is intended to complement other finance courses that are mainly based on the traditional paradigm which assumes that investors and managers are generally rational. Specifically, this course

has three main objectives. First, we aim to examine how the insights of behavioural finance theories shed light on the behaviour of individual investors and finance professionals in investment decision-making and corporate financial decision-making. Second, we explore the possibility to improve investment performance and corporate performance by recognizing the cognitive biases and applying appropriate 'debiasing' techniques. Finally, we investigate the implications of behavioural finance for the construction of good corporate governance mechanisms.

Course Outcomes:

On completion of the course, students will be able to:

CO1: Understand and behavioural finance perspective, traditional finance perspective, cognitive biases and errors of judgment that affect financial decisions.

CO2: Understand and critically discuss the cognitive biases and errors of judgment that affect financial decisions.

CO3: Apply behavioural influences involving individual's investment decisions.

CO4: Analysing the various dimensions of behavioural finance to different fields of applied finance.

CO5: Critically evaluate behavioural influences involving corporate (executive) financial decisions.

CO6: Create framework to use the dimensions and build models on behavioural corporate finance.

Course Content:

- **Module 1- Behavioral Finance: An Overview.**

Concept and Theoretical framework & Application of BF, Characteristics & Dimensions of BF, Behavioral Finance & Investment decisions. History of Behavioral Finance, Psychology: Concept, Nature, Importance, The psychology of financial markets, the psychology of investor behavior, Behavioral Finance Market Strategies, Traditional Vs Behavioral Finance- Efficient market hypothesis & alternate market hypothesis; Morality & Ethics - Why do they matter in the business world? Contextual and emotional biases.

- **Module 2- Foundations of Behavioral Finance-**

Behavioral Finance Market Strategies, Prospect Theory, Loss aversion theory under Prospect Theory & mental accounting—investors Disposition effect. Market Anomalies: Causes, Evidence of Calendar Effects, January effect, Weekend effect, Turn-of-the-year effect. Fundamental Anomalies. Technical Anomalies. Heuristics

& Behavioral Biases-overreaction, underreaction, herding, anchoring, framing, mental accounting, and regret theory.

- **Module 3 - Behavioral aspects of investing-**

Investor Behavior, Market Outcome, BB & K Five-way model, Value Investing. External factors and investor behavior: Fear & Greed in Financial Market, emotions, and financial markets: geomagnetic storm, Statistical methodology for capturing the effects of external influence onto stock market returns. Incorporating Behavioral Finance in Practice.

- **Module 4 – Behavioral Corporate Finance**

Behavioral corporate finance: Empirical data on dividend presence or absence, ex-dividend day behavior. Timing of good and bad corporate news announcements. The systematic approach of using behavioral factors in corporate decision-making. Agency Conflicts & Corporate Governance, Valuation. Capital Budgeting, Behavioral biases, and corporate decision-making - Managerial overconfidence, Investment & Overconfidence.

Textbook

Prasanna Chandra, Behavioural Finance, McGraw Hill, 2nd Edition, 2020, ISBN 978-9389811285.

Reference Books

1. Lucy F. Ackert, Richard Deaves, Behavioral Finance, Cengage, 2nd Edition, 2009, ISBN 978-0324661170.
2. William Forbes, Understanding Behavioral Finance, Wiley, 2011, ISBN 978-8126529360.
3. Baker, K., Nofsinger, J.R, Behavioral finance: Investors, Corporations and markets, Wiley, 1st Edition, 2010, ISBN 978-0470499115

Area: Marketing Management

Sl. No.	Course Code	Subject	L	T	P	Credit
Core Courses						
1	BM60301	Marketing Management – I	2	0	0	2
2	BM60302	Marketing Management – II	2	0	0	2

Elective Courses						
1	BM62303	Consumer Behaviour	1.5	0	0.5	2
2	BM62305	Product and Brand Management	1.5	0	0.5	2
3	BM62307	Services Marketing	1.5	0	0.5	2
4	BM62304	Retail Management	1.5	0	0.5	2
5	BM62311	B2B Marketing	1.5	0	0.5	2
6	BM62316	Real Estate Marketing	1.5	0	0.5	2
7	BM62306	Customer Relationship Management	1.5	0	0.5	2
8	BM62315	Integrated Marketing Communication	1.5	0	0.5	2
9	BM62308	Hospitality & Tourism Marketing	1.5	0	0.5	2
10	BM62310	Marketing Research	1.5	0	0.5	2
11	BM62313	Digital and Social Media Marketing	1.5	0	0.5	2
12	BM62314	Agency & Media Management	1.5	0	0.5	2
13	BM62318	Pricing Management *	1.5	0	0.5	2
14	BM62309	Sales & Distribution Management	1.5	0	0.5	2
15	BM62312	Digital Marketing Analytics	1.5	0	0.5	2

* Offered in both Marketing & Finance Area

Marketing Management – I

Subject Code: BM60301
Credit: 2-0-0-2
Prerequisite: Nil

Course Objective:

This is a fundamental course offered to every student of MBA program. It aims to give the students a broad understanding of the marketing function within an organization. It enables students to study macro and micro factors involved in developing and implementing the marketing strategies. The course develops concepts and skills necessary for taking marketing decision-making and illustrates how various decision-making tools and strategic frameworks apply to actual business scenarios.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts of marketing management.

CO2: Understand the importance of marketing related decisions in the organization.

CO3: Apply frameworks and theories of marketing in the real-world scenario.

CO4: Analyse various marketing situations through case studies and arrive at suitable solutions for various marketing issues.

CO5: Evaluate the problem-solving skills through real life cases.

CO6: Develop critical thinking ability supported by applications of various marketing tools.

Course Content:

- **Module 1: Core concepts of Marketing:** Objectives and Definitions of marketing, Fundamental Marketing concepts: Needs and Wants and Demands, Orientations to the market – Concepts, Marketing Myopia, and Differentiating between the three with illustrations.
- **Module 2: Understanding the Strategic Planning Models:** Strategic Planning Models- Business Unit Planning, Value Chain Analysis, Decision making through: SWOT Analysis, Porter's Generic Strategies and 5 forces, BCG Matrix, and Ansoff's grid.
- **Module 3: Marketing Environment:** Importance of environment scanning, Understanding Macro Environment variables/components, Understanding Microenvironment variables/components, and Differences between macro & micro variables.
- **Module 4: Consumer Buying Behaviour:** Define Consumer & its types, Buyer Roles, Theories of Consumer decision making (Buying Situation), Factors influencing Consumer Behaviour, Consumer buying processes & its stages, Behaviour Key Psychological Processes, Consumerism
- **Module 5: Organizational Buying Behaviour:** B2B- Business Market vs. Consumer Market, Stages in Buying Process, B2B Customer Relationship Management,
- **Module 6: Developing a Marketing Plan:** Marketing as a process, Marketing Plan components, and evaluation and understanding.
- **Module 7**: **Marketing Research:** Marketing Research, Types of MR, Quantitative and qualitative, The MR process, Demand estimation, sales forecasting, forecasting methods,

- **Module 8: Segmentation, Targeting, Positioning:** Levels of Segmentation, Basis for Segmentation and methods, Segmentation Criteria and evaluation of Segments, Selection of Target Segment, Product differentiation, Differentiation strategies, Positioning stances, and positioning strategies.
- **Module 9: Customer Relationship Management:** Customer Lifetime Value- The concept of Value delivery chain and supply chain, Differentiation between the two, Customer value and satisfaction, and Customer Lifetime Value.

Textbook

Philip Kotler, Kevin Keller, Alexander Chernev, Jagdish Sheth, G. Shainesh, Marketing Management, Pearson, 16th Edition, 2022, ISBN 978-9356062665.

Reference Books:

1. Lamb, Hair, McDaniel, Marketing, Cengage
2. Paul Fill Baines, & Kelly Chris Page, Marketing, Oxford Publications, 2nd Edition, 2011, ISBN 978-0199579617.

Marketing Management - II

Subject Code: BM60302
Credit: 2-0-0-2
Prerequisite: Nil

Introduction:

The aim of this course is to develop a disciplined process for addressing marketing issues and problems in a variety of settings, and to give students the tools and background necessary to think through marketing problems. The course aims to develop a critical appreciation of the basic concepts and techniques of marketing management and strategy with an emphasis on creating customer value and building customer relationships. The course develops concepts and skills necessary for marketing decision-making and illustrates how various decision-making tools apply to actual business situations.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts of marketing management.

CO2: Understand the importance of creating, capturing, communicating, and delivering value in marketing.

CO3: Apply frameworks and theories of marketing management in real life.

CO4: Analyse real-life case studies on marketing values and brand management to develop optimum solutions.

CO5: Evaluate the problem-solving skills required as a marketing management professional.

CO6: Develop critical thinking ability supported by the learned concepts of marketing management.

Course Content:

Creating Value through Product Strategy:

Various components of a Product strategy, Product Differentiation, Product Mix and Product Lines, Brand collaborations**.**

Capturing Value through Pricing Strategy:

Price Sensitivities, Consumer Psyche on Price, Factors in Pricing Strategy, Initiation and response to Pricing variations**.**

Delivering Value through Place Strategy:

Retailing and Wholesaling, Retail formats in Indian Context. Illustration of most often seen retailing formats. Outside class exercise with retail formats. Value Networks, how do Marketing Channels help material, money and information flow, Channel Design and optimizations.

Communicating Value through Promotion Strategy:

Tools of Communication Optimization of Promotion Mix, Integrated Marketing Communications, Managing Media**.**

Brand Equity / Brand Management:

Definition and Building of Brand Equity, Brand Management tools, Measuring Effectiveness.

Textbook

Philip Kotler, Kevin Keller, Alexander Chernev, Jagdish Sheth, G. Shainesh, Marketing Management, Pearson, 16th Edition, 2022, ISBN 978-9356062665.

Reference Books:

1. Lamb, Hair, McDaniel, Marketing, Cengage, 13th Edition.
2. Paul Fill Baines, & Kelly Chris Page, Marketing, Oxford Publications, 2nd Edition, 2011, ISBN 978-0199579617.

Consumer Behaviour

Subject Code: BM62303
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

This course aims to study the psychology of individual decision-making and choice-making strategies, the pattern of behavior exhibited by aggregate groups of consumers and the sociological and cultural influence on consumer behavior. The aim of this course is to develop an understanding of the core aspects of consumer psychology from economic and marketing perspectives.

Course Outcomes:

At the end of the course, the students will be able to

CO1: Learn the major concepts of consumer behaviour.

CO2: Understand the importance of customer psychology in marketing.

CO3: Apply frameworks and theories of consumer learning and attitude in real life.

CO4: Analyse real-life case studies and solve those to derive optimum solutions.

CO5: Evaluate the problem-solving skills for consumer learning.

CO6: Develop critical thinking ability supported by the learned concepts of consumer behaviour.

Course Content:

Introduction to Consumer Behaviour:

The marketing Concept, Technology and Consumers, Customer Value, Satisfaction and retention, Consumer Decision Making

Consumer Motivation and Personality:

The Dynamics of motivation, System of needs, personality development, Personality Traits, Anthropomorphism, Self-Perception

Consumer learning:

The elements of consumer learning, Classical Conditioning, Instrumental conditioning, Observational Learning, Cognitive learning, Consumer Involvement and hemispheric lateralization, Outcomes and measures of consumer learning

Consumer attitude formation and Change:

Attitude formation, The Tri Component attitude model, Attitude's additional function, Cognitive Dissonance and Conflict resolution, Causality and Attribution model

Textbook

Kumar Leon G., Schiffman; Joe, Wisenblit; S, Ramesh, Consumer Behaviour, Pearson, 12th Edition, 2014, ISBN-10ʕ : ʔ**9353069831**.

Reference Books:

1. David L. Mothersbaugh , Del I. Hawkins et al., 1) Consumer Behaviour: Building Marketing Strategy, McGraw Hill, 13th Edition, 2015, ISBN 978-1259232541.
2. Michael R. Solomon/ Tapan Kumar Panda, Consumer Behaviour, Pearson, 13th Edition, 2020, ISBN 978-9389552430.

Business-to-Business Marketing

Subject Code: BM62311
Credit: 1.5-0-0.5-2
Prerequisite: None

Introduction:

This course is designed primarily for students seeking a Sales and Marketing career in organizations that market products and services to other organizations. The course should be of special importance to individuals who want to start their own business in the B2B domain as case studies and lecturers focus on B2B marketing skills, including organizational buying and selling models, launching B2B products and services, pricing a product line, sales management, and support, managing distribution partners, and social media for B2B promotion. The course is also appropriate for those students' seeking careers in consulting, start-ups, and in other functional areas. The course emphasizes the tactical aspects of business marketing as well as the conceptual and strategic elements. This course explores the challenges in the marketplace by delving into unique problems confronting Business to-Business Markets today across a broad spectrum of organizations ranging from traditional industries to high-tech enterprises. It has been specially customized to meet the specific requirements of future managers by raising intriguing questions and debating options and possible alternatives based on the daily challenges.

Course Outcomes

On completion of the course, students will be able to:

- CO1: Acquire knowledge of the principles and concepts of business-to-business marketing.

- CO2: Develop a deep understanding of the dynamics and complexities of business markets and organizational buying behaviour.
- CO3: Apply B2B marketing strategies and techniques to effectively target and serve business customers.
- CO4: Analyse B2B market segmentation, pricing strategies, and supply chain management to optimize business-to-business marketing efforts.
- CO5: Evaluate the effectiveness of B2B marketing campaigns, customer relationship management practices, and strategic account management approaches.
- CO6: Develop advanced skills in comprehensive B2B marketing strategies, building strong customer relationships, and creating value for business customers.

Course Content:

Module 1: Introduction to B2B Marketing

- Context setting, introduction to B2B concepts, and career in B2B marketing
- Difference between B2B and B2C Marketing
- Organizational Buying Behaviour
- Different variables influencing buying decisions.

Module 2: B2B Market Research

- Market Sizing, Competitor Analysis
- STP in business markets

Module 3: 4Ps of marketing in B2B Context

- Product & Services Management
- Channels Management
- Promotions Management
- Pricing Management

Module 4: B2B Sales Management

- Personal Selling
- Key Account Management
- Customer Relationship Management

Textbook

Michael D.Hutt, Thomas W. Speh & Dheeraj Sharma, B 2 B Marketing, Cengage, 11th Edition, 2014.

Reference Books:

1. Brennan, Canning, McDowell, Business-to-Business Marketing, Sage, 2nd Edition, 2011, DOI: https://doi.org/10.4135/9781446276518.
2. Anderson and Narus, Business-to-Business Marketing, Pearson, 2nd Edition, 2003, ISBN 978-0130451873.
3. Havaldar & Dasari, B2B Marketing: Text and Cases, McGraw Hill, 5th Edition, 2021, ISBN 978-9390185597.

Hospitality & Tourism Marketing

Subject Code: BM62308
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The course introduces the participants to the Hospitality and Tourism Marketing. It will brush up the basics of Marketing Management with the exclusive insight, examples, cases and application of the Hospitality and Tourism industry in particular and Service industry in general. In this course due emphasizes on the practical aspects of the subject as well as the concepts is given. It draws extensively examples and short case studies of marketing in action. It equip the participants to analyze theory and applied case studies related to Hospitality and Tourism industry particularly in Indian context and the global context in general. The course shall prepare quality managers to take up responsibilities in a very broad area such as Hotels, Motels, Airlines, Cruise-lines, Travels agencies, Tour Operators, Travel BPO's, Consultancies, Customer Care and many other service industries such as Telecommunication, Healthcare, Entertainment etc.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts and practices of modern Hospitality and Tourism Marketing.

CO2: Understand the interrelated micro & macro environment components influencing Hospitality and Tourism industry.

CO3: Apply marketing concepts to Hospitality and Tourism industry.

CO4: Analyse real-life case studies and solve those to derive optimum solutions for the services industry in general and Hospitality & Tourism industry in particular.

CO5: Evaluate the target marketing strategy of a well-known Hospitality and Tourism firm.

CO6: Develop critical thinking ability of marketing of Hospitality and Tourism products and services at local, global, international, and intercultural levels.

Course Content

Understanding the Hospitality and Tourism Marketing Process:

Introduction: Marketing for Hospitality and Tourism

Developing Hospitality and Tourism Marketing Opportunities and Strategies:

The Marketing Environment, Managing Customer Information to Gain Customer Insights, Consumer Markets and Consumer Buying Behavior, Organizational Buyer Behavior, Customer -Driven Marketing Strategy: Creating Value for Target Customers

Developing the Hospitality and Tourism Marketing Mix:

Designing and Managing Products and Brands: Building Customer Value, Internal Marketing, Pricing: Understanding and Capturing Customer Value, Distribution Channels Delivering Customer Value

Developing the Hospitality and Tourism Marketing Promotion Mix:

Engaging Customers and Communicating Customer Value and Advertising, Promoting Products: Public Relations and Sales Promotions, Professional Sales, Direct, Online, social media, and Mobile Marketing

Textbook

Philip Kotler, John Bowen & James Makens, Marketing for Hospitality & Tourism, Pearson, 7th Edition, 2016, ISBN 978-0134151922.

Reference Books:

1. Sudhir Andrews, Introduction to Tourism & Hospitality Industry, TMH, 2007, ISBN 978-0070660212.
2. Stowe Shoemaker, Margaret Shaw, Marketing Essentials in Hospitality and Tourism, Pearson, 1st Edition, 2007, ISBN 978-0131708273

Marketing Research

Subject Code: BM62310
Credit: 1.5-0-0.5
Prerequisite: None

Introduction:

The Marketing Research course provides students with the knowledge and skills necessary to conduct effective marketing research. The course covers various aspects of the marketing research process, including research design, data collection methods, data analysis techniques, and report preparation. In addition, students will gain hands-on experience using tools (SPSS, MAXQDA, etc.) for data analysis.

Course Outcomes

On completion o the course, students will be able to

- CO1: Acquire knowledge of the marketing research process, research design, and data collection methods.
- CO2: Develop a comprehensive understanding of qualitative and quantitative research techniques used in marketing research.
- CO3: Apply research methods and tools to design and conduct marketing research studies.
- CO4: Analyse data using statistical techniques and software to draw meaningful insights and make informed marketing decisions.
- CO5: Evaluate the validity and reliability of research findings and assess their implications for marketing strategies.
- CO6: Develop skills in report writing, presentation, and effectively communicating research findings to stakeholders clearly and concisely.

Course Content:

Module 1: Introduction to Marketing Research

- Marketing Research in Marketing Decision Making
- Steps of Marketing Research Process
- Research Design (Qualitative, Quantitative, Experimental)

Module 2: Qualitative Research Design

- Qualitative Data Collection Methods
- Qualitative Data Analysis Techniques
    - Content Analysis
    - Sentiment Analysis

Module 3: Quantitative Research Design

- Research Design and Hypothesis Development
- Sampling Techniques and Sample Size Determination
- Questionnaire Design and Measurement Scales
- Data Collection Methods
- Data Cleaning and Preparation
- Inferential Statistics and Hypothesis Testing
- ANOVA, MANOVA, Regression

Module 4: Experimental Research Design

- Market Testing (Consumer and Industrial Products)
- A Refresher on A/B Testing & Multivariate Testing

Module 5: Applied Marketing Research Techniques

- Marketing Research for Product Development (Conjoint Analysis)
- Marketing Research for Segmentation, Targeting, Positioning (Cluster Analysis, Discriminant Analysis, Multi-Dimensional Scaling)
- Marketing Research for Pricing (Van Westendorp Pricing Model, Gabor-Granger Pricing Model, Price Sensitivity Measurement)
- Marketing Research for Promotion (TURF Analysis)
- Marketing Research for Consumer Behaviour (Factor Analysis)

Textbook

Naresh K. Malhotra, Satyabhushan Dash, Marketing Research: An Applied Orientation, Pearson, 7th Edition, 2019, ISBN 978-9353433291.

Reference Books:

1. Aaker, Kumar, Day & Leone, Marketing Research, Wiley, 11th Edition, 2012, ISBN 978-1118156636.
2. Zikmund, Babin, Essentials of Marketing Research, Cengage, 3rd Edition, 2007, ISBN 978-8131502815.
3. Nargundkar, Marketing Research: Text and Cases, McGraw-Hill, 3rd Edition, 2017, ISBN 978-0070220874.
4. Beri, Kaushik, Rehman, Marketing Research, McGraw Hill, 6th Edition, 2020, ISBN 978-9390177530.

Sales and Distribution Management

Subject Code:BM62309
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The objective of the course is to develop understanding and application of the Sales and Distribution processes in organizations. The course includes the familiarization of concepts, approaches and the practical aspects of the key decision-making variables in Personal Selling and Distribution Channel Management. Over the last decade sales and distribution function in companies has undergone a sea change with the boom in organized retail, e-tailing, influence of social media and network marketing. This course has been designed considering the changes in the business environment lately with a special focus on emerging markets like India.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts of sales and distribution management.

CO2: Understand the importance of personal selling, customer relationship management, channel design and channel partner management.

CO3: Apply frameworks and theories of personal selling, customer relationship management and channel management.

CO4: Analyse real-life case studies on sales and channel management to develop optimum solutions.

CO5: Evaluate the problem-solving skills required as a sales and distribution professional.

CO6: Develop critical thinking ability supported by the learned concepts of sales and distribution.

Course Content

Introduction to Sales and Distribution Management:

Importance of Sales Management. Types of Personal Selling. Selling Styles, Selling Situations and Required Selling Skills.

Selling Process and Framework:

Various Stages of Selling Process. Customer Buying Journey. Customer Relationship Management. Sales Funnel Analysis. Customer Qualification. Building Sales

Foundation. Understanding, Communicating, Delivering and Increasing Customer Value.

Developing and Designing a Distribution Channel:

Definition and interdependence of Marketing Strategy and Channel Strategy**.** Definition, Role & Function of Distribution Channels considering the perspectives of consumers, channel partners, environment and required selling strategy.

Evaluating a Distribution Channel:

Choice of Channel, Channel Preferences and Formats, Cannel Length, Functions, Distribution of Services, Distribution of Perishables, Models - Cash & Carry, Hub & Spoke

Channel Partner Management:

Operational Decisions in Channel Management, Channel Partners – Roles and Responsibilities. Evaluating Channel Partner performance.

Textbook:

Personal Selling and Channel Management related material complied by instructor.

Reference Books:

1. Pingali Venugopal, Sales and Distribution Management: An Indian Perspective, Sage, 2008.
2. Bert Rosenbloom, Marketing Channels: A Management View, Cengage Learning, 8th Edition, 2012, ISBN 978-8131518427.
3. Panda and Sahadev, Sales and Distribution Management, Oxford, 2nd Edition, 2011, ISBN 978-0198077046.

Services Marketing

Subject Code: BM62307
Credit: 1.5-o-0.5-2
Prerequisite: Nil

Introduction:

This course examines the importance and growing role of Services Marketing. The course will focus on current issues in services marketing and Customer Service strategies. This course focuses on effective customer relationship management, key service delivery elements, and service recovery strategies that lead to the successful implementation of a customer focus in service-based businesses.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the unique challenges of services marketing, including the elements of product, price, place, promotion, processes, physical evidence, and people.

CO2: Understand the profound impact of technology on services. Understand the service blueprinting, the integration of new technologies, and other key issues facing today's customer service providers and service managers.

CO3: Apply service quality measurements to build customer loyalty. Apply the expanded marketing mix for services and the philosophy of customer focus in real life situation.

CO4: Analyse and identify important trends in services.

CO5: Evaluate differences between goods and services and the resulting challenges and opportunities for service businesses. Evaluate the effectiveness and efficiency of customer service offerings.

CO6: Develop special services marketing practices to develop new market.

Course Content

Foundations for Service Marketing:

Introduction to Services, the Gaps Model of Service Quality

Focus on the Customer:

Customer Expectations, Customer Perceptions of Service

Understanding Customer Requirements:

Listening to Customers through Research, Building Customer Relationships, Service Recovery

Aligning Service Design and Standards:

Service Innovation and Design, Customer-Defined Service Standards, Physical Evidence and the Servicescape

Delivering and Performing Service:

Employees' Roles in Service, Customers' Roles in Service, Managing Demand and Capacity

Managing Service Promises:

Integrated Service Marketing Communications, Pricing of Services

Service and the Bottom Line:

The Financial and Economic Impact of Service

Textbook

Valarie A. Zeithaml, Mary Jo Bitner, Dwayne D. Gremler, Services Marketing: Integrating Customer Focus across the Firm, McGraw Hill, 7th Edition, 2017, ISBN 978-0078112102.

Reference Books:

1. Jochen Wirtz & Christopher Lovelock, Services Marketing: People, Technology, Strategy, 8th Edition, 2016, ISBN 978-1944659004.
2. John E. G. Bateson and K. Douglas Hoffman, Services Marketing, Cengage, 4th Edition, 2012, ISBN 978-8131516478.
3. Rajendra Nargundkar, Services Marketing: Text & Cases, McGraw Hill, 2006, ISBN 978-0070616318.

Customer Relationship Management

Subject Code: BM62306
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

This course aims to provide students with a comprehensive understanding of Customer Relationship Management (CRM) principles and practices. By the end of the course, students will be able to apply CRM strategies to build and maintain effective customer relationships. The course objectives are designed to facilitate higher-order thinking and skill development.

Course Outcomes:

At the end of the course, the students will be able to:

CO1: Learn the fundamental concepts and components of CRM.

CO2: Understand the importance of customer-centric strategies in business success and interpret the customer lifecycle and its relevance to CRM.

CO3: Apply CRM tools and techniques to collect and analyse customer data and develop strategies for customer acquisition, retention, and loyalty.

CO4: Analyse the impact of CRM on organizational performance and profitability and assess the effectiveness of CRM strategies in different business contexts.

CO5: Critically evaluate CRM implementation challenges and potential solutions.

CO6: Design a comprehensive CRM plan for a specific business scenario and develop personalized customer engagement strategies based on data insights.

Course Content:

Module 1: Introduction to CRM

- Definition and Evolution of CRM
- Importance of CRM in Business
- Customer- Centric Strategies

Module 2: Customer Data Management

- Types and Sources of Customer Data
- Data Collection and Analysis Techniques
- Data Privacy and Security

Module 3: Customer Lifecycle Management

- Customer Acquisition and Lead Generation
- Relationship Development and Customer Retention
- Customer Loyalty and Advocacy

Module 4: CRM Technology and Systems

- CRM Software and Tools
- Implementation and Integration of CRM Systems
- CRM Analytics and Reporting

Module 5: Customer Communication and Engagement

- Effective Communication Channels
- Personalization and Segmentation
- Social CRM and Online Engagement

Module 6: CRM Performance Measurement and Improvement

- CRM Metrics and Key Performance Indicators (KPIs)
- Feedback and Continuous Improvement
- Ethical Considerations in CRM

Textbook

Francis Buttle, Customer Relationship Management: Concepts and Applications, Routledge, 3rd Edition, 2015, ISBN 978-1138236813.

Reference Books:

1. V. Kumar, Werner Reinartz, Customer Relationship Management: Concepts and Tools, Springer, 2nd Edition, 2012, ISBN 978-3642201301.
2. Paul Greenberg, CRM at the Speed of Light: Capturing and Keeping Customers in Internet Real Time, McGraw-Hill Education, 2001

Product and Brand Management

Subject Code: BM62305
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The course aims to broaden the horizon of marketing emphasizing on a whole range of intricate and complicated activities starting from market research, new product or product category planning, R&D, product launching, sales strategies, integrated communication formats, distribution, pricing and overall strategizing. Shortening PLCs, increased power of suppliers, increased focus on customer retention programs and integration into the global space has made it imperative for the students specializing in marketing to understand the fundamentals of building, measuring, analysing and managing brands and product categories for a company. The course reinforces learning through hands-on exposure to developing new products to conducting brand audit of existing brands gives the students an ample opportunity to hone their skills in product and brand management.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the concept and various aspects of product and brand management.

CO2: Understand the importance of product brand management as a part of marketing function.

CO3: Apply the real-life practices related to product and brand development.

CO4: Analyse real-life case studies and solve those to derive solutions.

CO5: Evaluate the problem-solving skills in product and branding situations.

CO6: Develop critical thinking ability supported by the learned concepts of product and brand management.

Course Content

Product Management

1. Introduction to Product Management -An overview of Product Management: Brushing up the basics of Product Mix, Hierarchy, Types of products, Product organization, Product Manager vs Marketing Manager, Skills Required, Changes affecting Product Management, Role of a Product Manager, Product Strategies. Marketing Planning. Elements of Marketing Plan, Needs and Benefits, Elements, SWOT Analysis, Objectives, Segmentation, Targeting and Positioning

2. Competitor Analysis. Competition and Competitor Analysis - Defining Competitive Set, Bases of Competition, Levels, Methods for Determining Competitors, Product Deletion, Need for Competitor Analysis, Value Chain, Segmentation Variables for Consumer Markets, Cluster Analysis
3. Category Attractiveness. Category Attractiveness - Aggregate Category Factors, Marketing Variables, Category Attractiveness over PLC, Category Factors, Category Rivalry, Developing Product Strategy - Elements of a product strategy, Strategic Alternatives, Customer target selection, Value Proposition, Differentiation Strategies, Managing PLC. New Product Development - Need, Categories, Product Modification, Line Extensions, Success Factors, Stages of NPD, New Products, Impact of Product Redesign

Brand Management

1. Introduction to branding, concepts in brand building process, Strategic Planning for creating a brand vision, strategic fit and use of brand knowledge pyramid, concept of brand identity & brand image, Brand Evolution. Selection of branding strategy, Brand evolution grid & trajectory, concept of brand architecture and its implication on branding strategy. Managing Brands over time. Brand strategies, Managing brands in a borderless world.
2. Understanding and measuring brand equity. Concept of brand equity and brand value chain, Understanding Brand equity models like Aaker model, CBBE model, researching and measuring brand equity, Brand value and its measurement by various methods.

Textbook

Kirti Dutta, Brand Management, Oxford University Press, 2nd Edition, 2012, ISBN 978-0198069867.

Reference Books:

1. Kevin Lane Keller, Vanitha Swaminathan, Ambi MG Parameswaran, Isaac Jacob, Strategic Brand Management, Pearson, 5th Edition, 2020, ISBN 978-9353946135.
2. Donald R. Lehman, Russell S. Winer, Product Management, McGraw Hill, 4th Edition, 2017, ISBN 978-0070603486.

Integrated Marketing Communication

Subject Code: BM62315
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The primary objective is to enable the student to develop a deep understanding of the communication function within the firm's marketing for brand equity and its sustenance in the long run. This course shall help acquire knowledge in the principles and practices of marketing communication. To think and act strategically, plan and design IMC projects in sync with business and creativity. It also encompasses the other important tool of sales promotions which serves to build sales equity. With advent of digital platforms, the use of IMC tools such as public relations, events, sponsorships, direct marketing, and digital and social media have emerged as potential tools to establish a strong connect with the consumers.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts of IMC process and the range of IMC tools used.

CO2: Understand the significance of Integrated Marketing Communication in the marketing strategy formulation.

CO3: Apply frameworks and theories of the concepts of marketing communication strategy formulation through real life situations by studying key consumer insights.

CO4: Analyse real-life case studies and offer marketing communication solutions in brand building.

CO5: Evaluate the problem-solving skills to come up new creative output after studying the market realities embracing the brands.

CO6: Develop critical thinking ability to develop effective campaigns with media plans to achieve marketing goals.

Course Content

Fundamental of Integrated Marketing Communication

Marketing Communication concepts, definitions and cases, Genesis of Marketing Promotion Mix and IMC introductions, Knowing IMC and Advertising and Market Environment, Significance of IMC in marketing communication strategy formulation.

Consumer Behaviour

Consumer behaviour related to IMC, planning promotional programme, Learn on socio-cultural-eco-environmental psychology and decision making. Communications

Process, consumer response hierarchy, message, consumer involvement, cognitive processing. Organisations that business Interacts, advertising agency, integrating advertising to business.

Advertising strategy and other tools

Advertising campaign, strategy statement and approach. Creative Process involved in advertising, Advertising Research Process – a key strategic tool process, IMC Tools used in advertising strategy; Sales Promotion and Direct marketing, PR, Publicity and Corporate Advertising.

Media Plan Development and Ethics

Media Planning and Strategy, Developing the Media Plan. Consumer media, audience measurement, evaluation of mass media types, media budgets. Print media, broadcast media, media planning and developing, The Legal and Ethical Environments. Legislation of advertising, self-regulatory codes of conduct in advertising, legal and ethical concepts and issues. Regulation governing sales promotion, packaging, labelling, direct marketing, internet marketing.

Textbook

Kruti Shah and Alan Dsouza, Advertising and Integrated Marketing Communications, TMH, 2009

Reference Books:

1. Terence A. Shimp, Integrated Marketing Communication in Advertising and Promotion, Cengage, 8th Edition, 2010, ISBN 978-8131516522.
2. George E. Belch, Michael A. Belch and Keyoor Purani, Advertising and Promotion: An Integrated Marketing Communications Perspective, McGraw Hill, 7th Edition, 2009, ISBN 978-0070144965.

Agency & Media Management

Subject Code: BM62314
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction

This course builds the necessary competence in managers to manage accounts in advertising or media agencies for various campaigns of their clients. The course enables the student to walk through the stages of campaign development in an advertising agency from briefing to complete execution of the campaign. This also

builds a good appreciation of the agency side of the business if they are on the client side. In agency management, the students get the knowledge of the major parts, functions and methods of an ad agency. In agency management the students get to know the importance of briefing to creative and media to achieve the goals of communication campaigns of the client. Account development & planning, pitching and servicing the existing accounts form the basis of this part of the course. The students also get an opportunity to understand creative process in agencies. In media management students get an appreciation of the media planning, buying and selling functions.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the marketing communication process and role of the agencies involved.

CO2: Understand the agency management dimensions and media planning and buying.

CO3: Apply the learnings from the communication theories in the area of agency and media management.

CO4: Analyse real-life case studies and solve those to appropriate solutions in agency and media management.

CO5: Evaluate the perspectives in marketing communication process in an ad campaign development and execution.

CO6: Develop critical thinking ability supported by the learned concepts of agency and media management.

Course Content

Introduction to AMM. Understanding Marketing Communication, Emerging complexities in marketing communication, Defining the communication objectives and its execution- Cognitive response model, Elaboration Likelihood Model. Implication of using FCB Grid in campaign development.

Agency Management. Introduction to the advertising industry, Structure and types of agencies, Specialized agencies, Functions of an advertising agency, Departments of an advertising agency, Agency Operations & Management- Client Agency Relationship, Pitch and its types, Factors affecting selection of ad agencies.

Account Planning

Introduction to campaign development, creative briefing, creative development-big idea using market / consumer insights, account planning and development,

reinforcement of creative inputs through brand revitalization, brand repositioning, rebranding techniques.

Media Management

Roles of the Media Buyer, Seller and Agencies, Media Basics, Media Strategy, Media Weights, Media Mix Decisions, Scheduling, building a Plan, Evaluating Media Buys, The Buying Process, Budget Setting

Textbook

Kumar Leon G., Schiffman; Joe, Wisenblit; S. Ramesh, Media Planning and Buying, Pearson, 12th Edition.

Reference Books:

1. Roger Baron, Jack Z. Scissors, Advertising Media Planning, McGraw Hill, 7th Edition, 2010, ISBN 978-0071703123.
2. Ronald, D. Geskey Sr, Media Planning & Buying in the 21st Century Workbook, Createspace, 4th Edition, 2016, ISBN 978-1537438269.

Digital and Social Media Marketing

Subject Code: BM62313
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction

Consumer interactions with businesses and other consumers are constantly changing because to social media platforms. These adjustments indicate a fundamental shift in the market, giving customers more chances to interact with companies and marketers, express their ideas, and connect with other consumers. Changing market landscape emphasises the use of social media to interact with consumers and spread concepts, ideas, messages, products, and behaviour. In-depth examination of the connection between media and human behaviour is the focus of this course, which also looks at how businesses may use social media and digital interactions to their advantage. The creation of thorough social media strategies for active brands will be practised by students. .

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn the major concepts of social media marketing.

CO2: Understand the various channels through which it operates, and its role in marketing strategy.

CO3: Apply principles of consumer and social behavioural aspects to develop social media content and campaigns that engage consumers.

CO4: Analyse real-life case studies to explore concepts at a deeper level.

CO5: Evaluate the impact of a social media campaign in terms of a marketing objectives.

CO6: Develop critical thinking ability supported by the learned concepts of social media marketing.

Course Content

Introduction to Digital and Social Media Marketing:

Introduction to the concept of digital marketing mediums and various aspects of social media marketing

Understanding nature of social marketing:

Explore the marketing theories and methods that can be used to promote social marketing methods vis-a-vis traditional field of marketing. Understand how social marketing strategies might alter marketing strategies and objectives.

Designing campaign strategies:

Understand how to develop programmes that will bring about behavioural change and use that to develop campaign strategy for each channel.

Role of communication in social and digital marketing

Develop communication strategy with focus on copy strategy, content design, keyword research and attribution modelling. This module will rely on a combination of project assignments and case studies primarily.

Textbook

Rob Stokes, eMarketing: The essential guide to digital marketing, Red &Yellow, 5th Edition, 2018, ISBN 9780620565158.

Reference Books

Dan Zarella, Oreilly, The social Media Marketing Book, O'Reilly Media Inc, 2009, ISBN 9780596806606.

Digital Marketing Analytics

Subject Code: BM62312
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

This course focuses on metrics used for digital marketing and analytical frameworks. There is no prerequisite for the class. Exposure to digital marketing courses (like DSMM) or analytical courses will be beneficial. Tools and techniques in measuring and analysing Digital Marketing application and their outcomes will be explored during the course. Course will be designed through business applications to develop and analyse strategies based on data. Data from platforms like Facebook, Google Analytics and SEMRUSH will be used.

Course Outcomes

At the end of the course, the students will be able to

CO1: Learn major concepts of data analytics for digital marketing.

CO2: Understand various data analytics tools and structure for various components of digital marketing.

CO3: Apply principles of digital and social media marketing strategies to develop campaign analytics CO4: Analyse real-life case studies to understand analytics usage and actions taken based on data analysis

CO5: Evaluate and use various tools and platforms for digital marketing analytics like – Google Analytics, Meta Business Suite, Twitter Analytics, Google Search Console

CO6: Develop digital marketing analytics dashboards and reports.

Course Content

Introduction to Digital and Social Media Marketing:

Introduction to the concept of digital marketing mediums and various aspects of social media marketing

Understanding nature of social marketing:

Explore the marketing theories and methods that can be used to promote social marketing methods vis-a-vis traditional field of marketing. Understand how social marketing strategies might alter marketing strategies and objectives.

Designing campaign strategies:

Understand how to develop programmes that will bring about behavioural change and use that to develop campaign strategy for each channel.

Role of communication in social and digital marketing

Develop communication strategy with focus on copy strategy, content design, keyword research and attribution modelling. This module will rely on a combination of project assignments and case studies primarily.

Textbook

Personal Material as compiled by the instructor.

Reference Books

1. Chuck Hemann; Ken Burbary, Digital Marketing Analytics, QUE, 2nd Edition, 2018.
2. Kevin Hartman,Digital Marketing Analytics: In Theory And In Practice, Sybex 2020, ISBN 9798638634780.

Real Estate Marketing

Subject Code: BM62316
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

The aim and objective of Real Estate Management (REM) course is to inculcate, infuse and build in the students an understanding on real estate business and new business potentials. It shall make the candidates understand the needs, concepts, principles and practices of Real Estate Marketing. Issues of new economy and emerging market forces yielding to profitable business on homing, and infrastructure. Emphasis shall be on real estate management related exercises, articles, case studies, simulation games, role plays , reviews , current article analysis , field visit, individual and group assignments/ projects. They shall foster a holistic idea in the candidate and make him designed to orient accordingly.

Course Outcomes

At the end of the course, the students will be able to

CO1: Understand on the holistic aspects of marketing for comprehensive approach to business plans for startups.

CO 2: Know the elements of the domain which plays in creating value and business, including financial products.

CO 3: Shall implement innovative ideas of business for the new markets in new economy.

CO 4: Analyse different facets of business models in Public Private Partnership.

CO 5: Evaluate the usage of channels of distribution and cross functionality.

CO 6: Develop on the ideas of brand management and competitive strategies.

Course Content:

- Module-1: Real Estate Marketing and Business. Introduction and Overview of REM, Why Real Estate? Introduction to Real Estate Marketing. What is real estate? Concept, origin, merging business, global scenario. The principle and practice of real estate markets. Genesis of privatization and housing privatization. Scenario of real estate. Housing policies in a comparative study. Theory and practice of privatisation worldwide. Philosophy of privatization and governance unfolding market forces. Types of privatisations, housing privatization, global phenomenon. Housing programs and paradigms globally. Privatization approach and housing Market. Conflicting issues during transition. Importance of land use. Growth and development.
- Module 2 Strategic Marketing Through PPP and Smart Cities. Smart cities, Housing programs and paradigms- Privatization and approach, Market in the scales, Conflicting issues and during transition, and Land use. Housing paradigms and project management- Development of Institutions, Capacity building, management of natural resource and sustainable development, and PPP in Infrastructure, human settlement, UN Role. Urban design in development- Urban design and development, Builders market potential, Urban layouts, development, and planning for business, Urban Land use planning, Municipality, Tahasils, Stakeholders, Environment and sustainable development, and Global strategy for shelter.
- Module 3 Laws and Regulations: Governance and Markets. Marketing, advertisement and salesmanship in housing. BB Pay Master committee, Co-operative housing, first legislation, Marketing issues and advertising, Business Ethics in real estate marketing. Developer housing regulations. Business ethics in real estate, P.G. Kher Committee in Maharashtra, PPP legislation in 1975. IT Usage in real estate market and property business. Population boom, Urban policy planning, community participation, Markets in buildings, population migration, GIS, GPS and networking.

- Module 4 Business Development and Evolving Reality Business. Governance and business development. Confrontations and Compromises. E-governance, New business, Product innovation, R and R Policy. Housing Business, New Business, and Integrated Marketing communication. Business Communication in real estate, sales promotion, Direct selling, BDA. Lagal aspects of real estate market. Legalisation of business, Phases in development of laws, laws governing business. Finance Market Promotion, Potential of private housing developers, finance markets. Marketing and Financial aspects of Realty, Golden Coffer and Society, Age old business.

Textbook

Biswajit Das and Asish Kumar Pani, Real Estate Market, Excel Publications, 1st Edition, 2006, ISBN 9788174464446.

Reference Books

Robert Kiyosaki, The Real Book of Real Estate, Perseus, 2016.

Retail Management

Subject Code: BM62304
Credit: 1.5-0-0.5-2
Prerequisite: Nil

Introduction:

This course enables the students to understand the retailing process, the environment within which it operates and the various retail institutions along with their functions. Make students aware of the retail marketing strategies and the financial performance of retail business. The course would provide knowledge and inculcate analytical skills required for retail management and build strong foundation for students who plan to make their career in field of retailing factoring in current globalization/ internationalization trends.

Course Outcomes:

On completion of the course, students will be able to:

CO 1: Understand retail marketing for creating value with product and price strategy.

CO 2: Learn about retail operations and why it is so difficult to implement a winning retail strategy.

CO 3: Analyse how different retail formats compete for share of retail wallet and why certain retail concepts perform better than others across different retail segments.

CO 4: Exercise efficiently choosing, creating and communicating customer worth in retail markets and converting that worth into returns growth and profitability.

CO 5: Evaluate how consumers look at retailers and how they value different companies.

CO 6: Create and develop retail marketing strategies and plans for conducting retail marketing responsibly for long-term success.

Course Content:

- Module 1: Retailing in India. Introduction, Market Size, Investment Scenario, Government Initiatives, What Does the Retailing Industry Include? The Importance of Retailing, Retail Strategy and Structure, Margin Turnover Model, Store Strategy Mix, Non-Store Retailing, Retailing Decisions, Emerging Trends in Retailing.
- Module 2: Retail formats & theories. Introduction, Classification of Retail Formats, Form of Ownership, The Wheel of Retailing, Traditional Retail Formats, Modern Retail Formats, Types of Chain Stores in the Indian Context.
- Module 3: Retail Strategy. Introduction, what are the Key Growth Imperatives and Enablers, The Need for Strategy Formulation, Organizational Objectives Driven by Planning, Strategic Options Available to Retailers for Exploring Opportunities, The Indian Context of Retailing, Significance of Category Management as a Strategy Tool, Role of Promotional Mix in Retail Strategy, Services Retailing: A Growth Area.
- Module 4: Understanding Retail Consumers. Introduction, Retail Activities, Consumer Behavior, Patterns, Factors Affecting Consumer Decision Making Process, Stages of Consumer Decision Process, Types of Consumer Decision Making Process, Influence of Situational Variables on Shopping Behavior, Consumer Images of Retail Stores, A Sample of a Customer Profile and Analysis.
- Module 5: Location, Store Design & Layout. Introduction, Importance of Locational Decisions in Retailing, Aspects of Locational Decisions and Influencing Factors, Nature of Retail Locations, Nature of Consumer Goods and Location Decision Area, Techniques for Locational Assessment and Retail Locational Theories.
- Module 6: Retail Merchandising, Merchandising Buying & Control. Introduction, Merchandising, Cross Merchandising, Objectives of Merchandising, Merchandise Planning, Category, Category Captains, Private vs. National Brands, Quality as a Parameter of Merchandising, Merchandise Mix, Factors Affecting Merchandise Mix Decisions, Merchandise Logistics, Supply Chain Management, Planogram.

- Module 7: Retail Atmospherics. Introduction, Importance of Atmospherics Planning, Key Components of Retail Atmospherics, Visual Merchandising in India, Store Space Management, Retail Performance Measures, Atmospherics in Context with Internet Retailing.
- Module 8: Retail Pricing & Merchandise. Introduction, External Influences on Retail Pricing Strategy, Retail Pricing Objectives, Retail Pricing Approaches, Retail Pricing Strategies, Tactics for Fine Tuning the Base Price, Setting Retail Prices, Methods for Setting Retail Prices, Role of Price Elasticity and Sensitivity- Consumer Responsiveness to Prices.
- Module 9: Retail Operations, Measuring Retail Performance. Introduction, The Merchandise Decision Matrix, Merchandise Management in Organised Retail Category Management, Merchandise, Planning - The Key in Category Management, Measuring Profitability in Retail Operations, Monitoring Performance in Retail Operations, Maintaining Uniformity Across Retail Outlets.
- Module 10: Technology in Retailing. Introduction, Need for Technology, Application of Technology in Various Areas of Retailing, Factors Influencing Selection of Technology, Latest Trends of Technology in Retailing, Precautions While Handling to Technology in Retail, Electronic Article Surveillance (EAS), American Business Systems (ABS).
- Module 11: Retail Marketing & Communication. Introduction, Reasons Governing the Change in Customer Attitude, Retail Marketing Communication, Basic Tasks of Communication, Integrated Marketing Communication: The Concept, Steps for Designing and Effective IMC Strategy, Positioning of a Retail Store, Store Atmosphere and Visual Merchandising, Retail Promotions, Promotional Objectives, Types of Sales Promotions, Role of Salespeople and Sales Promotion.
- Module 12: Service in Retail Sector. Image and presentation, Promotion and services, Contact and communication with customers, Service delivery, Monitoring and improving services, Resolving Customer problems, Customer relationship management, The Evolution of Customer Relationship Marketing, Strategies of Customer Relationship Marketing in Retailing Industry, Customer Relationship Marketing (CRM) in Organised Vs. Unorganised Retail Sector, Establishing Loyalty Programmes.
- Module 13: Omni channel and Customer Experience. Traditional Customer Life Cycle, Digital Customer Life Cycle, The future of Customer Experience, Omni channel feat marketing technology. Experiential retailing, Reattainment.

- Module 14: Green Retailing. Curbing Waste, reducing packaging, better use of energy, Fewer distribution trips, Reducing Product Miles by sourcing more products locally, The green paradox, Balancing the needs of shareholders, consumers and environment.

Textbook

Chetan Bajaj, Rajnish Tuli and Nidhi Varma Srivastava, Retail Management, Oxford Publication, 3rd Edition, 2016, ISBN 978-0199467440.

Reference Books:

1. Barry Berman & Joel R. Evans, Retail Management: A Strategic Approach, Pearson, 13th Edition, 2017, ISBN 978-0133796841.
2. Robert F. Lusch , Patrick M. Dunne & James R. Carver, Introduction to Retailing, Cengage, 8th Edition, 2013, ISBN 9781285546056.
3. Gibson G. Vedamani, Retail Management: Functional Principles and Practices, Pearson, 2003, ISBN 9788179921517.
4. Sudarshan Seshanna & Raghu Prasad, Retail Management, McGraw Hill, 2015, ISBN 9789339203061.
5. Fiona Elliott & Janet Rider, Retail Buying Techniques, Jaico Books, 2008, ISBN 9788179927366.

Area: Business Analytics

Sl. No.	Course Code	Subject	L	T	P	Credit
Core Course						
1	BM605011	Quantitative Techniques – I	**2**	**0**	**0**	**2**
2	BM60502	Quantitative Techniques – II	**2**	**0**	**0**	**2**
3	BM60506	Business Analytics	**2**	**0**	**0**	**2**
4	BM60504	Business Research Methods	**2**	**0**	**0**	**2**
Elective Courses						
1	BM62511	Data Analytics Using R	1.5	**0**	**0.5**	**2**
2	BM62508	Advanced Business Analytics	1.5	**0**	**0.5**	**2**
3	BM62505	Introduction to Markeing A nalytics	1.5	**0**	**0.5**	**2**
4	BM62512	Supply Chain Analytics*	1.5	**0**	**0.5**	**2**
5	BM62507	Analytics Toolbox	1.5	**0**	**0.5**	**2**
6	BM62115	HR Analytics**	1.5	**0**	**0.5**	**2**

7	BM62515	Credit Risk Analytics	1.5	**0**	**0.5**	**2**
8	BM62509	Advanced Statistics and Probability for Data Science	1.5	**0**	**0.5**	**2**
9	BM62510	Machine Learning & Artificial Intelligence using Python***	1.5	**0**	**0.5**	**2**
10	BM62503	Data Mining and Business Intelligence***	1.5	**0**	**0.5**	**2**
11	BM62518	Multivariate Data Analysis	1.5	**0**	**0.5**	**2**
12	BM62514	Predictive Analytics using SAS	1.5	**0**	**0.5**	**2**
13	BM62516	Text Mining and Analytics	1.5	**0**	**0.5**	**2**
14	BM62513	Python for Data Science	1.5	**0**	**0.5**	**2**

*Course offered in Operations Area and Business Analytics.

** Course offered in the HR and Business Analytics Area. Detailed Syllabus provided in the OB/HRM area Courses.

*** Courses offered in the ITM and Business Analytics area.

Quantitative Techniques – I

Subject Code: BM605011
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

Businesses are now increasingly using statistical techniques to convert data into information, which helps in appropriate decision making. This paper, in Decision Sciences area, prepares the students to understand and appreciating the essential concepts and applications, with focus on relevant tools and techniques.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the concepts of statistical techniques,

CO2: Understand the use of quantified / statistical facts,

CO3: Apply statistical techniques to convert data into information,

CO4: Infer various statistical techniques,

CO5: Evaluate statistical tools, compare and select for analysis of relevant data, and

CO6: Derive objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys.

Course Contents

- Role of Statistical Data, Summary & Descriptive Statistics
- Measures of Central Tendency
- Measures of Dispersion, Coeff. of variation
- Probability & Probability Distributions
- Discrete Probability distributions: Binomial & Poisson distributions
- Continuous Probability Distribution: Normal Distribution, Using Standard Normal Probability Distribution table
- Sampling Concepts (What, why and how sampling made; Prob & non-prob. Sampling)
- Estimation
- Introduction, Point Estimates, Interval Estimates, Confidence Intervals (applications & concepts only)
- Testing Hypotheses
- One-Sample Tests
- Two-Sample Tests
- Chi-Square as a Test for independence
- Analysis of Variance (ANOVA)

Textbook

Levin, Richard I., Rubin, David S., Rastogi, Sanjay, Statistics for Management, Pearson, 7th Edition, 2016, ISBN: 978-8131774502.

Reference books

1. Anderson, Sweeny et al, Quantitative Methods for Bus, Cengage Publications, 13th Edition, 2015, ISBN: 9781305480568.
2. Anderson, Sweeny et al, Introduction to Management Science, Cengage Publications, 14th Edition, 2019, ISBN: 978-9353502362.
3. Keller, Gerald, Managerial Statistics, Cengage Publications, 9th Edition, 2012, ISBN: 978-8131517598.

Quantitative Techniques – II

Subject Code: BM60502
Credit: 2-0-0 2
Prerequisite: Quantitative Techniques – II

Introduction

Businesses are now increasingly using statistical techniques to convert data into information, which helps in appropriate decision making. This paper, in Decision Sciences area, prepares the students understanding and appreciating the advanced concepts and applications, with focus on relevant advanced tools and techniques.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the concepts of basic statistical techniques,

CO2: Understand the need for data conversion to valid information,

CO3: Solve LP problems by Graphical Method & problems using Excel Solver,

CO4: Analyze various statistical techniques and infer relationship between impacting factors,

CO5: Evaluate advanced statistical tools, compare and select for analysis of relevant impacting factors, and

CO6: Develop expertise in Operations Research.

Course Contents

- Bi-Variate Study (Correlation & Regression)
    - Simple Regression Analysis
    - Inferences about Regression as a whole (using F test)
    - Multi-collinearity in Multiple Regression
    - Estimation using the Regression Line using Method of Least Squares; Standard Error of Estimate & its interpretation
    - Correlation Analysis: Multiple Regression, Coefficient of Determination,
    - Concept & applications of Multiple Regression (limited to interpretation of output/ results only; rigorous calculations to be excluded); computer (software, like SPSS) output analysis

- Nonparametric Tests; (Sign Test, Run Test, Rank-sum U test)
- Introduction to Operations Research (OR):
- Formulation of Problems (LPP); Solving LP problems by Graphical Method & problems using Excel Solver.
- Simplex method (maximization LPP solutions)

Textbook

Levin, Richard I., Rubin, David S., Rastogi, Sanjay, Statistics for Management, Pearson, 7th Edition, 2016, ISBN: 978-8131774502.

Reference books

1. Anderson, Sweeny et al, Quantitative Methods for Bus, Cengage Publications, 13th Edition, 2015, ISBN: 9781305480568.
2. Anderson, Sweeny et al, Introduction to Management Science, Cengage Publications, 14th Edition, 2019, ISBN: 978-9353502362.
3. Hillier, Mark S., Hillier, Frederick S., Introduction to Management Science, McGraw Hill Publications, 5th Edition, 2019, ISBN: 978-9353167103.

Business Research Methods

Subject Code: BM60504
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

The course is intended to help the management students appreciate and use the basic tools and techniques of Business Research in decision making. Emphasis will be given on conceptual understanding of the basic, useful tools and techniques and its meaningful applications.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the concepts of business research,

CO2: Understand how business research is different from different pure science research,

CO3: Apply the concepts of measurement in practical research projects through Questionnaire design and attitude management,

CO4: Analyze sampling techniques in field research works,

CO5: Evaluate and interpret basic descriptive statistics, and

CO6: Develop expertise and effectively communicate research in a written report and presentation.

Course Contents

- Module 1 (Introduction to BRM): What is Research Methodology- Different types of research: problem solving research, Applied and basic research, Scientific research, Research and the Scientific Method, Business Research, Good Research, Scientific Method in Good Research.
- Module 2 (Measurement Concepts): Measurement and scaling concepts; Levels of scale measurement. Attitude Measurement- Attitude as hypothetical construct, Attitude rating scales, Measuring Behavioural intension, Ranking, Other methods of attitude measurement, Selecting a measurement scale. Questionnaire Design- Questionnaire quality and design, Guidelines for constructing questions, Interactive and adaptive questions Layout and sequence of the questions, Administering the questionnaire.
- Module 3 (Sampling and Fieldwork): Sampling designs and sampling procedures – Reason for sampling, Sampling concepts, Sampling error, Types of sampling, Concepts of accuracy and Diversity in sampling. Determination of sample size – A review of Statistical Theory: The normal distribution, Population distribution, sample distribution and sampling distribution Central limit theorem, Sample size. Fieldwork – Nature of fieldwork, Good interviewing techniques and fieldwork management
- Module 4: (Qualitative Research): Focus Group Discussion, In Depth Interview techniques, Projective Techniques, Ethnography, New trends in Qualitative Research.
- Module 5: (Working with Data): Editing and coding data, Descriptive statistics
- Module 6: (Quantitative Statistical Analysis with SPSS and MS Excel), Hypothesis testing (one-tailed test, two-tailed test), t-test and Z-test, Cross-tabulation, ANOVA, Correlation and Regression.
- Module 7: (Writing a Research Report), Structure of research report, Presentation of report

Textbook

Zikmund, Willaim G., Carr, Jon C., Griffin, Mitch, Babin, Barry J., Business Research Methods, Cengage, 9th Edition, 2013, ISBN: 978-9353503260.

Reference books

1. Malhotra, Naresh K., Dash, Satyabhusan, Marketing Research, Pearson Publications, 7th Edition, 2019, ISBN: 978-9353433291.
2. Cooper, Donald, Schindler, Pamela, Sharma, J.K., Business Research Methods, McGraw Hill Publications, 11th Edition, 2017, ISBN: 978-1259001857.
3. Zikmund, William G., Babin, Barry J., Essentials of Marketing Research, Cengage Publications, 3rd Edition, 2007, ISBN: 978-8131502815.

Business Analytics

Subject Code: BM60506
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

Recently corporates from diversified sectors have been active in using data. The motivation for using data comes from a significant reduction in cost in storing and fetching data. Companies can generate and store huge volume of data through ERP implementation, Internet of things, social media and different audio/video encodings. The challenge is to browse through the huge volume of data and to create stories out of them, which would further be useful for increasing top-line of companies or mitigating risk. How much information can be extracted from a set of data is the major objective or challenge.

To assist corporates in taking data driven decisions it needs a knowledge base to explore and visualize data, to be able to create dashboards and make stories, and most importantly to present the technicalities in the embedded data to a non-technical audience. This course introduces to the various facets of data and its distributions. It opens the student to the applications of discrete mathematics, probability, and statistics in the area of data science. It introduces various plots to visualise and interpret data, which are the crux of decision science. Further it adds to the area of predictive analysis using basic models which could be steppingstone for further learnings and applications in analytics. The course will also introduce to the programming language R which is available as an open source.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the importance of big data in management and its properties,

CO2: Understand business communication through data-driven information,

CO3: Apply knowledge and explain natural processes by relating them to a certain distribution of data,

CO4: Analyze globally used statistical software,

CO5: Evaluate and compare descriptive and predictive analytics with use case scenarios, and

CO6: Develop expertise to create statistical charts and tables for further use in dashboards.

Course Contents

- Introduction, Role of Data in Organization
- Data lifecycle. (Data source, data changes, processes, usage)
- Data representation forms (linear, exponentials, logarithmic)
- Various data types (numeric, categorical)
- Discrete mathematics
- Understanding distributions in Data
- Fundamentals of probability (Basic Idea, expectation, probability calculus, conditional probability)
- Probability distribution function (uniform, normal, binomial, chi-square, student's t distribution)
- Central limit theorem, central tendency of data concepts
- Data visualization concepts; (scatter plot, pie chart, histogram, bar chart, boxplot, density plot, area plot etc)
- Data visualization using R/ Excel
- Concepts of data cleaning; importance in analytics
- Time series Data and Regression Models
- Forecasting Technique
- Introduction to predictive analytics
- Supervised vs. unsupervised learning (concepts only)

Textbook

Course material will be provided including online contents as and when the class continues.

Reference books

1. Albright, Christian S., Winston, Wayne L., Business Analytics: Data Analysis and Decision making, Cengage Publications, 6th Edition, 2019, ISBN: 978-9353502553.
2. Knaflic, Nussbaumer Cole, Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley Publications, 1st Edition, 2015, ISBN: 978-1119002253.
3. Evans, James, Business Analytics: Methods, Models, and Decisions, Pearson Publications, 3rd Edition, 2019, ISBN: 978-0135231678.
4. Dietrich, David, Heller, Barry, Yang, Beibei, Data Science & Big Data Analytics, Discovering, visualizing and presenting Data, Wiley Publications, 2015.
5. Lander, Jared P.,, R for Everyone, Advanced Analytics and Graphics, Pearson Publications, 1st Edition, 2014, ISBN: 978-9332539242.
6. Wickham, Hadley, Grolemund, Garrett, R for Data Science, Import, Tidy, Transform, Visualize, and Model Data, O'Reilly Publications, 1st Edition, 2017, ISBN: 978-9352134977.
7. Wickham, Hadley, Ggplot2, Elegant graphics for data analysis, Springer Publications, 2009.
8. Kanetkar, Yashavant, Let Us Python, BPB Publications, 2022, ISBN: 978-9391392253.

Data Analytics using R

Subject Code: BM62511
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

With increase in computing power and data storage capacity, present day businesses are gearing up to access its benefit. Companies are able to generate and store huge volume of data through ERP implementation, Internet of things, and audio/ video encoder technologies. Every minute details related to customer engagement with businesses are tracked and are stored in machines. How much information can be extracted from a set of data is the challenge. Business Analytics use the power of probability and advanced statistical concepts to analyse data more intelligently.

This includes quantitative, statistics, and predictive modelling for generating/ finding data-driven insights which takes the decision-making process in businesses one step further. Thus the results from the analytics may be used for developing competitive strategies for a business scenario. This can be used in the field of finance, marketing, operations, and HR for identifying ROI drivers, developing target market for a product, fine-tuning the supply chain, churn management etc. The course will target to achieve introductory knowledge on Analytics to enhance the decision-making process from diverse field of applications. The course will also introduce to the programming language R which is available as an open source.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the importance of business analytics in organization,

CO2: Understand data segmentation and classification techniques,

CO3: Apply R software to run machine learning models,

CO4: Analyze and use missing data using MICE algorithm,

CO5: Evaluate and compare Case studies using R, and

CO6: Develop expertise in dealing with data.

Course Contents

- Introduction, Role of Business analytics in Organization
- Analytics project life cycle and stages
- Business Statistics (Descriptive and Inferential)
- Data distribution; probability density functions
- Introduction to predictive analytics
- Working with Data – Introduction to R
- Data Visualization – Using R
- Data Wrangling
- Data imputation
- Linear Regression & Prediction modelling– (Theory and modelling using R)
- Logistic Regression & Prediction modelling – (experience with using R)
- Supervised vs. unsupervised learning

- Data segmentation and classification technique- Decision science – Trees & clustering
- Business Analytics – Case studies using R

Textbook

No textbook is prescribed. Course handout will be provided**.**

Reference books

1. Kabacoff, Robert I., R in Action, Data Analysis and Graphics with R, Manning Publications, 2011, ISBN: 9781935182399.
1. Ledolter, Johannes, Data Mining and Business Analytics with R, Wiley–Blackwell Publications, 1st Edition, 2013, ISBN: 978-1118447147.
2. Lander, Jared P., R for Everyone, Advanced Analytics and Graphics, Pearson Publications, 1st Edition, 2014, ISBN: 978-9332539242.
3. Wickham, Hadley, Grolemund, Garrett, R for Data Science, Import, Tidy, Transform, Visualize, and Model Data, O'Reilly Publications, 1st Edition, 2017, ISBN: 978-9352134977.
4. Wickham, Hadley, Ggplot2, Elegant graphics for data analysis, Springer Publications, 2009.

Advanced Business Analytics

Subject Code: BM62508
Credit: 1.5-0-0.5 2
Prerequisite: Business Analytics

Introduction

Business Analytics use the power of probability and advanced statistical concepts to analyse data more intelligently. This includes quantitative, statistics, and predictive modelling for generating/ finding data-driven insights which takes the decision-making process in businesses one step further. Thus the results from the analytics may be used for developing competitive strategies for a business scenario. This can be used in the field of finance, marketing, operations, and HR for identifying ROI drivers, developing target market for a product, fine-tuning the supply chain, churn management etc. The course will target to achieve introductory knowledge on Analytics to enhance the decision-making process from diverse field of applications. The course will also introduce to the programming language R which is available as an open source. Intended learning outcomes

Course Outcomes

At the end of the course, the students will be able to

CO1: Recall the power of probability and advanced statistical concepts,

CO2: Understand the predictive analytics of Logistic regression,

CO3: Apply the concepts of decision tree to understand machine learning,

CO4: Analyze data and perform data imputation,

CO5: Evaluate and compare customer churn, marketing spends with data backed insights, and

CO6: Generate tidy data format using <tidyverse> package of R.

Course Contents

- Introduction, Role of Business analytics in Organization
- Data Visualization (Using R)
- Advanced descriptive analytics, more use of ggplots library and interpretations
- Data cleaning operations, Data preparations for analytics (use dplyr, tidyverse and stringr library for slicing and dicing data)
- Missing data types and operations (Multivariate Imputation by Chained Equations in R)
- Predictive analytics fundamentals
- Analysing the residuals (OLS regression)
- Linear Regression (Multiple regression) & Prediction modelling–(R & other software)
- Categorical data analysis
- Logistic Regression & Prediction modelling (parameters estimation)–(experience with using R and other software)
- Logistic model diagnostics, classification table, optimal cut off probability
- Supervised vs. unsupervised learning - Introduction to machine learning
- Data segmentation and classification technique- Decision science – Trees & clustering
- Decision strategies without outcome probabilities & with outcome probabilities
- Utilities in decision making

- Text analytics (Introduction to document term matrix and random forest models)
- Boosting and Bagging, Support vector machines
- Introduction to deep learning
- Prescriptive analytics – Linear & Integer Optimization
- Advanced analytics Case studies and real-world applications using R

Textbook

No textbook is prescribed. Course handout will be provided**.**

Reference books

1. Evans, James, Business Analytics: Methods, Models, and Decisions, Pearson Publications, 3rd Edition, 2019, ISBN: 978-0135231678.
2. Kumar, Dinesh U., Business Analytics: The Science of Data - Driven Decision Making, Wiley Publications, 2017, ISBN: 978-8126568772.
1. Ledolter, Johannes, Data Mining and Business Analytics with R, Wiley–Blackwell Publications, 1st Edition, 2013, ISBN: 978-1118447147.
2. Wickham, Hadley, Grolemund, Garrett, R for Data Science, Import, Tidy, Transform, Visualize, and Model Data, O'Reilly Publications, 1st Edition, 2017, ISBN: 978-9352134977.

Introduction to Marketing Analytics

Subject Code: BM62505
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The goal of this course is to develop a disciplined process for addressing marketing issues and problems in a variety of settings, and to give students the tools and background necessary to think through marketing and business problems. The course helps in developing these skills in a deep-rooted manner so that students retain the marketing skills learnt through the course. Live projects would encourage students to apply the concepts and generalizations to a real-life product or service. The general route to be followed in the course is concept learning followed by illustration and finally application of the concepts in as real a setting as possible within the boundaries of the course and the institutional educational setup.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify required marketing skills,

CO2: Understand the major marketing concepts and models,

CO3: Apply the major marketing concepts and models learnt through the analysis in various software,

CO4: Analyze the importance of marketing as a function in a business organization using data backed decisions making process,

CO5: Evaluate the linkages of marketing as a function to other functions within a business organization, and

CO6: Develop a disciplined process for addressing marketing issues and problems in a variety of settings.

Course Contents

Module 1

- Introduction to Analytics: Importance of analytics in business world, data driven decision making, and uses of analytics in various fields of E-commerce, FMCG, Media industry etc.
- Summarizing the Marketing Data: Analysing the sales data with various angles. Use of Pivot Table to understand and analyse the data. Use of real-world data to explain the example.
- Pricing Strategy for optimization: Understanding the pricing concept and how analytics can be used optimize it. Use of Excel Solver to Optimize the Power Demand Curves
- Price Bundling: Understanding the meaning and use of price bundling

Module 2

- Market Forecasting using simple Linear Regression and Correlation: Understanding the importance of forecasting in Marketing and thus using Simple Linear Regression to summarize various relationships
- What do customers want – Conjoint Analysis: Understanding the basic principles of consumer behavior and interpreting the results through Conjoint analysis

Module 3

- Calculating Lifetime Customer Value: Understanding the basic customer lifetime value template. Assessing its importance and value through simple case study

- Retail analytics: Understanding the market lift analysis and calculation of lift for two products. How to allocate retail space and resources.

Module 4

- Advertising analytics: Measuring the Effectiveness of adverting spend and understanding the various media selection models

Textbook

No textbook is prescribed. Course handout will be provided**.**

Reference books

1. Winston, Wayne L., Marketing Analytics: Data-Driven Techniques with Microsoft Excel, Wiley Publications, 1st Edition, 2014, ISBN: 978-1118373439.
2. Venkatesan, Rajkumar, Farris, Paul, Wilcox, Ronald, Cutting-Edge Marketing Analytics-Real World Cases and Data Sets for Hands, Pearson Publications, 1st Edition, 2014, ISBN: 978-0133552522.

Supply Chain Analytics

Subject Code: BM62512
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course is designed primarily for students seeking an Analytics career in different organizations. The course should be of special importance to individuals who are seeking careers in consulting in operations and supply chain domain. This course is designed to help students master the analytical tools and techniques like optimization and simulation that are useful in designing and managing supply chains. The emphasis will be on how different analytics models can be used in some fundamental supply chain applications such as transportation, capacity allocation, production planning, network flow, aggregate planning, sales & operations planning, and network design.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the key metrics and parameters in Supply Chain Analytics,

CO2: Understand the purpose of various analytical models,

CO3: Apply descriptive, predictive and prescriptive analytics in Supply Chain,

CO4: Analyze modelling and optimization techniques to infer supply chain,

CO5: Evaluate different decision domains in supply chain analytics, and

CO6: Create simulation models for different supply chain scenarios and problems.

Course Contents

Module 1: Introduction to Supply Chain Analytics

- Source Analytics (Strategic Sourcing, Supplier Management, Order Management)
- Make (Production) Analytics (Production Planning, Workforce Management, Inventory Management)
- Move Analytics (Fulfilment Diagnostics, Distribution and Logistics Planning, Transportation Management)
- Sell Analytics (Demand Planning, Product Selection, Pricing and Promotion)

Module 2: Supply Chain Analytics – Descriptive Analytics

- Visualization and Dashboard

Module 3: Supply Chain Analytics – Predictive Analytics

- Demand Forecasting
- Inventory Analytics

Module 4: Supply Chain Analytics – Prescriptive Analytics

- Green Field and Brown Field Analysis
- Network Optimization
- Transport Optimization

Module 5: Supply Chain Simulation

- Descriptive Modelling with Simulation
- Running Simulation experiments
- Integrating bullwhip effect and ripple effect into simulation models

Software Tools

- MS® Excel
- SAS® Forecast Studio (Academic Version)
- AnyLogic® Simulation (Academic Version)

Textbook

No textbook is prescribed. Course handout will be provided**.**

Reference books

1. Novack, Robert, Gibson, Brian, Coyle, John, Managing Supply chains - A logistics approach, South-Western College Publications, 10th Edition, 2016, ISBN: 978-1305859975.
2. Sanders, Nada R., Big Data Driven Supply Chain Management: A Framework for Implementing Analytics and Turning Information into Intelligence, Pearson FT Press, 2014, ISBN: 978-0133801286.
3. Mathirajan, Muthu, Chandrasekharan, Rajendran, Sowmyanarayanan, Sadagopan, Arunachalam, Ravindran, Balasubramanian, Parasuram, Analytics in Operations/Supply Chain Management, I K International Publishing House Pvt. Ltd, 2015, ISBN: 978-9384588946.
4. Shapiro, Jeremy F., Modelling the Supply Chain, Duxbury Thomson Learning, South-Western College Publications, 1st Edition, 2016, ISBN: 978-0534373634.
5. Simchi-Levi, David, Simchi- Levi, Edith, Shankar, Ravi, Designing and Managing the Supply Chain concepts, Strategies and Case studies, McGraw Hill Publications, 3rd Edition, 2019, ISBN: 978-9386601995.
6. Tayur, Sridhar, Ganeshan, Ram, Magazine, Michael, Quantitative Models for Supply Chain Management, Springer Publications, 1999 Edition, ISBN: 978-0792383444.

Analytics Toolbox

Subject Code: BM62507
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Major data exercises at industry level find excel applications extremely useful. Thus, the paper includes the use of excel functionalities directed for analytics works. R and Python programming language are rapidly finding their usage in industries for data science applications. Python programming Lab will be a part of learning in this course. Extensive use of Python libraries for data science fundamentals and statistical applications are major learning objectives.

Data visualization and reporting are the crux of data science applications. Tableau provides powerful and easier drag and drop GUI applications for better plotting and reporting methods. The course will provide the above application related knowledge to make the students conversant for usage of the same in data science projects.

Course Outcomes

At the end of the course, the students will be able to

CO1: Recall the basic concepts of Excel,

CO2: Understand features of Python, Excel, Tableau, and Power BI software packages,

CO3: Apply advanced excel methods for simulations and analytics,

CO4: Analyze data using Python, Excel, Tableau, and Power BI software packages,

CO5: Evaluate and defend best practices in Data Visualization, and

CO6: Develop ability to analyze structural approach to the data problems and solutions.

Course Contents

Module 1: Data Visualization with Tableau and Power BI

- Best Practices in Data Visualization
- Visualization with Tableau (Plots, dashboarding, and reporting using Tableau)
- Visualization with Power BI (dashboarding, Interactive reports)

Module 2: Data Analytics using Excel

- Excel fundamentals
- Advanced excel methods for simulations and analytics
- What-if analysis, regression analysis, hypothesis tests.

Module 3: How to Analyze (Conceptual tools)

- How to Analyze? A structural approach to the data problems and solutions
- Minto Pyramid etc.

Module 4: Data Analytics using Python

- Programming in Python
- Introduction to functions in Python
- Descriptive statistics using Python

Textbook

No textbook is prescribed. Course handout will be provided**.**

Reference books

1. Wexler, Steve, Shaffer, Jeffrey, Cotgreave, Andy, The Big Book of Dashboards: Visualizing Your Data Using Real–World Business Scenarios, Wiley Publications, 1st Edition, 2017, ISBN: 978-1119282716.
2. Nathan Yau, Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics, Wiley Publications, 1st Edition, 2011, ISBN: 978 978-0470944882.
3. Cole Nussbaumer Knaflic, Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley Publications, 1st Edition, 2015, ISBN: 978-1119002253.
4. Evans, James, Business Analytics: Methods, Models, and Decisions, Pearson Publications, 3rd Edition, 2019, ISBN: 978-0135231678.
5. Vijayvargia, Abhishek, Machine Learning with Python Language, BPB Publications, 2018, ISBN: 978-9386551931.
6. Kanetkar, Yashavant, Let Us Python, BPB Publications, 2022, ISBN: 978-9391392253.

Credit Risk Analytics

Subject Code: BM62515
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Credit is essential in the modern world and creates wealth, provided it is used wisely. Credit risk is the largest risk in any bank's asset portfolio – on balance-sheet as well as off balance-sheet. Banks hold a wide variety of assets with varying characteristic of credit risk. This course will provide approaches to measure credit risk that is fully aligned with the regulatory approach under the Basel Accords. The methodology for measuring credit risk of different types of credit portfolios will be discussed – segmentation based methods for retail portfolios as well as a rating based approach for corporate credits. The course also covers the analytical methods of model validation.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify different measures of credit risk,

CO2: Understand traditional credit models,

CO3: Apply knowledge of different regulatory approaches to measuring credit risk,

CO4: Analyze credit rating & credit scoring – strengths and weaknesses,

CO5: Evaluate different measures of credit risk and credit derivatives, and

CO6: Develop hands on knowledge of estimation of different components of credit risk – PD, LGD and EAD.

Course Contents

- Introduction: Market vs. credit risk; Statistical Basis for Modeling Credit; Advantages and Limitations of Credit Appraisal and Default
- Prediction Methods: The elements of credit risk: Default; Exposure; Loss given default or recovery; Expected, unexpected loss, and VaR
- Models of Single Counterparty Default Risk:
- Overview: From traditional to modern credit risk models
- Scoring, logit and probit; Applying Scoring Models to Firms & Consumer Credit Scoring; Behavioural Scoring Models
- Rating-based models: CreditMetrics, CreditPortfolioView
- Asset-based (structural) models: Merton's model and its implemenation by KMV, first passage models, Leland and Toft's endogenous bankruptcy model
- Intensity-based (reduced-form) models
- Actuarial Approach: Mortality tables, CreditRisk+
- Portfolio Models of Default and Recovery: CreditMetrics; Correlated defaults; Copula distributions; KMV for portfolios
- Regulatory issues under Basel II and Basel III; standard approach versus IRB approaches for credit risk; Modelling PD, LGD and EAD; Calculation of capital charges
- Credit risk management: Economic capital; Exposure mitigation -- Netting, collateral, limits, guarantees
- Credit derivatives: Credit default swaps, Total return swaps, collateralized debt obligations

Textbook

Compiled text material.

Reference books

1. Gordian, Gaeta, Alibhai, Shamez, Hingorani, Justin, Frontiers in Credit Risk: Concepts and Techniques for Applied Credit Risk Measurement, Wiley Publications, 1st Edition, 2002, ISBN: 978-0471479062.
2. Shimko, David, Credit Risk Models & Management, Risk Books Publications, 2nd Edition, 2004, ISBN: 978-1904339212.
3. Vibrant Publishers, Walsh, Dr. Michael, Credit Risk Measurement: New Approaches to Value–at–Risk and Other Paradigms, Vibrant Publications, 1st Edition, 2021, ISBN: 978-1636510347.
4. Saunders, Anthony, Credit Risk Measurement: New Approaches to Value–at–Risk and Other Paradigms, Wiley Publications, 1st Edition, 1999, ISBN: 978 978-0471350842.

Advanced Statistics and Probability for Data Science

Subject Code: BM62509
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The demand for insight from data has gained importance over the years. The availability of data has spurred such a demand. The traditional and conventional level of insight has been questioned and lacked competitive advantage. Organizations want to have a comprehensive analysis rather than isolating individual data and analyzing it. Complexity and data volume has created a premium for accuracy in decision making. This course will enable students to appreciate such factors, question existing analysis process, learn new methodologies and techniques. This course cuts across disciplines and can be used in all areas of investigation.

Course Outcomes

At the end of the course, the students will be able to

CO1: Recall the basic concepts of statistics,

CO2: Understand statistical tools and probability theories,

CO3: Apply knowledge of above in business decision making,

CO4: Analyze different parametric models,

CO5: Evaluate multivariate random variables and their functions, and

CO6: Develop the ability to use new methodologies and techniques for accuracy in decision making.

Course Contents

- Basic Probability Theory (Probability spaces, Conditional probability, Independence)
- Random Variables (Definition, Discrete & Continuous random variables, Conditioning on an event, Functions of random variables, Generating random variables)
- Multivariate Random Variables (Discrete & Continuous random variables, Joint distributions of discrete and continuous variables, Independence, Functions of several random variables, Generating multivariate random variables, Rejection sampling,
- Expectation (Expectation operator, Mean and variance, Covariance, Conditional expectation,
- Random Processes (Definition, Mean and auto covariance functions), Independent identically- distributed sequences, Gaussian process, Poisson process, Random walk
- Convergence of Random Processes (Types of convergence, Law of large numbers, Central limit theorem, Monte Carlo simulation)
- Markov Chains (Time-homogeneous discrete-time Markov chains, Recurrence, Periodicity, Convergence, Markov-chain Monte Carlo)
- Frequentist Statistics (IID sampling, Mean square error, Consistency, Confidence intervals, Nonparametric model estimation, Parametric model estimation)
- Bayesian Statistics (Bayesian parametric models, Conjugate prior, Bayesian estimators,)
- Hypothesis testing (Parametric testing, Nonparametric testing)
- Linear Algebra (Vector spaces, Inner product and norm, Orthogonality, Projections, Matrices, Eigen decomposition, Eigen decomposition of symmetric matrices)

Textbook

Rice, John A., Mathematical Statistics and Data Analysis, Cengage Publications, 3rd Edition, 2013, ISBN: 978-8131519547.

Reference books

1. Johnson, Richard A., Miller, Irwin, Freund, John E., Probability and statistics for engineers, Pearson Publications, 8th Edition, 2010, ISBN: 978-0321640772.
2. Freedman, David, Pisani, Robert, Purves, Roger, Statistics, W. W. Norton & Company Publications, 4th Edition, 2007, ISBN: 978-0393929720.

Machine Learning & Artificial Intelligence using Python.

Subject Code: BM62510
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The objective of this course is to help students understand the concepts, methods and application of machine learning and AI in ever changing business environment. Students will learn supervised learning applications using decision tree, Random Forest and Artificial neural networks. Subsequently, they will learn unsupervised learning techniques like clustering, dimensionality reduction and deep learning.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the basic concepts of AI, machine learning and deep learning,

CO2: Understand the use of AI in business decision making process,

CO3: Apply knowledge of Python in machine learning,

CO4: Analyze unsupervised, unsupervised and deep learning techniques,

CO5: Evaluate various learning algorithms, and

CO6: Formulate and interpret various machine learning problems to real world business applications.

Course Contents

- **Introduction to Machine Learning:** Basic concepts of AI, machine learning and deep learning, Categories of machine learning algorithms, Justification of machine learning applications in real world business problems, Understanding the framework of machine learning model, Justification of using Python as a language of machine learning using open source package like Anaconda and

Google colab as a free jupyter notebook environment. Understanding bias and variance trade off.

- **Descriptive Analytics using Python:** Understanding descriptive analytics, loading of dataset to perform exploratory data analysis, dataset filtering, grouping, joining, ordering, slicing, indexing, cross tabulation , missing data analysis ,preparation of various plots and comparing distributions using python.
- **Simple and Multiple Linear Regression Models:** Understanding concept of simple and multiple linear regression in predictive analytics , regression model diagnostics (Residual vs fitted Plot, Normal Q-Q plot, Scale Location Plot, Residuals vs Leverage Plot), understanding splitting of dataset into training and test datasets, accuracy measures like R square, adjusted R square, RMSE and model summary using python.
- **Classification Models:** Introduction to binary logistic regression, odd ratio, logistics function, logit, model building, understanding model summaries, accuracy measurement, interpreting confusion matrix and ROC Curve, treatment of categorical features ,Application of Multinomial logistic regression using python, building decision tree using entropy and Gini criteria , accuracy measurement, over fitting, pruning and introduction to ensemble learning like bagging(ex: Random Forest) and boosting (AdaBoost).
- **Clustering:** Importance of clustering as an unsupervised learning algorithms, understanding clustering techniques, application and interpretation of k means clustering using Python datasets, features normalization, Interpretation of clusters. Application of PAM algorithm and Hierarchical clustering in Python using various datasets.
- **Association Rule Mining Applications:** Introduction to Associate Rule Mining/ Market Basket analysis, understanding concept of measures like support, confidence and lift, loading datasets to apply a priori algorithm, interpreting interesting association rules. Introduction to ECLAT algorithm and FP Growth algorithmic to deal with huge datasets using Python.
- **Introduction to Neural Network and Deep Learning:** Understanding neural networks, perceptron algorithm for binary classifiers using Python, elementary introduction to ANN, CNN and RNN. Basic understanding of Restricted Boltzmann Machine and Auto encoders

Textbook

Chandra, Vinod SS, Hareendran, Anand S., Artificial Intelligence and Machine Learning, PHI Publications, 2nd Edition, 2014, ISBN: 9789389347838.

Reference books

1. Finlay, Steven, Artificial Intelligence and Machine Learning for Business: A No-Nonsense Guide to Data Driven Technologies, Atlantic Publishers and Distributors, 2nd Edition, 2017, ISBN: 978-1999730307.
2. Mitchell, Tom M., Machine Learning, McGraw Hill Publications, 1st Edition, 2017, ISBN: 978-1259096952.
3. Shalev-Shwartz, Shai, Ben-David, Shai, Understanding Machine Learning: From Theory To Algorithms, Cambridge University Press, 3rd Edition, 2015, ISBN: 978-0321640772.
4. Russels, Artificial Intelligence: A Modern Approach, Pearson Publications, 3rd Edition, 2015, ISBN: 978-9332543515.
5. Prakash, PKS, Krishna Rao, Achyutuni, R Deep Learning Cookbook, Packt Publications, 2017, ISBN: 978-1787121089.

Data Mining and Business Intelligence

Subject Code: BM62503
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The objectives of this course are to impact knowledge about the emerging trends of Data Mining and Business Intelligence and to help students understand and appreciate the importance of making meaningful use of large volume of data for the purpose of decision-making in the complex and ever changing business environment. The students will be exposed to real life business applications as BI student projects.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the trends of business intelligence,

CO2: Understand the best practices and trends of business intelligence,

CO3: Apply data mining tools and techniques,

CO4: Analyze the role of BI systems in supporting decision making in business world,

CO5: Evaluate and compare decisional systems and operational systems, and

CO6: Design multi dimensional models and Dashboards.

Course Contents

- **Introduction to Data warehouse:** Introduction to Data Warehouse, Operational vis-a-vis decisional Systems, Necessity and commercial importance of a Data Warehouse , Enterprise Data warehouse and Data Mart, 2 tier and 3 tier Architecture, ETL Process, Multi-dimensional modelling: Multi-dimensional representation of data, Normalization vis-a-vis Dimensional Modelling, Star Schema ,Snow Flake Schema and Fact Constellation.
- **Introduction to Data Mining:** Evolution of Data Mining, applications in business, concepts, overall functionalities and challenges, KDD vis-a-vis Data Mining, DBMS vis-a-vis Data Mining
- **Frequent Pattern Mining:** Association rule mining introduction, Concept of support, confidence and lift with an example, Sense of rule quantity, rule quality and importance of FIM Algorithm. Application of A Priori algorithm as FIM algorithm to find out interesting rules using R. Application with large dataset using ECLAT and FP Growth algorithm using R.
- **Classification Techniques and it's Applications:** overview , Hold out and Cross validation approaches, concept of confusion matrix , issues of pre processing like data cleaning, data transformation and feature selection, Bias variance trade off , approaches to missing data analysis and combining classifiers for better model performance(Bagging and Boosting), Concept, decision tree construction, Information gain, Entropy and gini value significance for ID3.
- **Clustering Techniques:** Introduction, distance function, applications, measurement of similarity, concept of squared error and absolute error criterion , Explanation of K means Clustering with an example of R dataset, Understanding PAM Algorithm with example with R dataset. Application of DBSCAN and BIRCH Algorithm using very large Datasets using R
- **Introduction to BI, Query and Reporting:** Understanding Business Intelligence technology. Market for business Intelligence: Operational and tactical business Intelligence and driving forces of BI Market, Component of Business Intelligence Architecture, Business Query and Reporting, concepts of 3 dimensional reporting using data cubes, Slicing, dicing and pivoting, Multidimensional BI Reporting.
- **Power BI Applications :** Introduction, understanding architecture of power BI, Comparison with Tableau, Data transformation with power BI Desktop, Introduction to Power BI Data Modelling, Data visualization with Power BI Desktop, sharing and Working with DAX,

Textbook

1. Pudi, Vikram Radhakrishna P., Data Mining, Oxford Publishing Press, 2009, ISBN: 978-0195686289.
2. Howson, Cindi, Successful Business Intelligence, McGraw Hills Publications, 2nd Edition, 2013, ISBN: 978-0071809184.

Reference books

1. Turban, Efraim, Sharda, Ramesh E., Decision Support And Business Intelligence Systems, Pearson, 9th Edition, 2010, ISBN: 978-0136107293.
2. Vercellis, Carlo, Decision Making, Wiley Publications, 1st Edition, 2009, ISBN: 978-0470511398.
3. Shmueli, Galit, Patel, Nitin R., Bruce, Peter C., Data Mining For Business Intelligence: Concepts, Techniques And Applications In Microsoft Office Excel With XL Miner, Wiley Publications, 2nd Edition, 2010, ISBN: 978-0470526828.
4. Delmater, Rhonda, Hancock, Monte Jr., Data Mining Explained: A Manager's Guide To Customer-Centric Business Intelligence, Digital Press, 2001, ISBN: 978-1555582319.
5. Raisinghani, Mahesh, Business Intelligence In The Digital Economy: Opportunities, Limitations And Risks, IGI Press, 2003, ISBN: 978-1591402060.
6. Vitt, Elizabeth, Luckevich, Michael, Misner, Stacia, Making Better Business Intelligence Decisions Faster, Microsoft Press, 2002, ISBN: 978-0735616271.

Multivariate Data Analysis

Subject Code: BM62518
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course is designed to broaden and enrich a student's knowledge and understanding of statistical concepts. Multivariate statistical techniques can be used to analyze data in various fields: Finance, Production and Operations, Accounting, Marketing, and Personnel Management, etc. Through examining actual applications in various fields, and in-class exercises involving real-world data, students can

apply the techniques to topics such as consumer and market research, supply chain analytics, credit worthiness and risk assessment etc and learn how to make better business decisions.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember basic concepts of multivariate statistical methods,

CO2: Understand multivariate model building,

CO3: Apply SPSS and/or open source programs to carry out multivariate data analyses,

CO4: Analyze the results of multivariate data analyses,

CO5: Evaluate and select Multivariate Methods, and

CO6: Develop ability to rightly interpret results of multivariate data analyses.

Course Contents

- **Module 1** (Overview of Multivariate Methods): Types of Multivariate techniques, Structured approach to multivariate model building
- **Module 2** (Data Preparation for Multivariate Analysis). Assumptions underlying Multivariate Analysis, Missing Data, Outliers, Data transformation
- **Module 3** (Interdependence Techniques). Exploratory Factor Analysis, Cluster Analysis
- **Module 4** (Dependence Techniques). Multiple Regression Analysis, MANOVA – Extending ANOVA, Multiple Discriminant Analysis, Logistics Regression
- **Module 5** (Multiple-criteria decision-making (*MCDM*) Techniques): Conjoint Analysis, Analytic Hierarchy Process (AHP), Goal Programming

Textbook

Hair, Joseph F., Babin, Barry J., Anderson, Rolph E., Black, William C., Multivariate Data Analysis, 8th Edition, Cengage, 2018, ISBN: 978-9353501358.

Reference books

1. Field, Andy, Discovering Statistics Using IBM SPSS Statistics, Sage Publications, 4th Edition, 2019, ISBN: 978-9351500827.
2. Johnson, Applied Multivariate Statistical Analysis, Pearson Publications, 6th Edition, 2018, ISBN: 978-0134995397.
3. Tabachnick, Barbara G., Fidell, Linda S., Using Multivariate Statistics, Pearson Publications, 6th Edition, 2012, ISBN: 978-0205849574.

Predictive Analytics using SAS

Subject Code: BM62514

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Introduction

SAS is still one of the most commonly used tools in the business analytics industry. This course is intended to introduce students to **SAS®** (Enterprise Guide and Enterprise Miner) and to have hands-on exercise using **SAS®** for Predictive Analytics. Through examining actual applications in various fields, and in-class exercises involving real-world data, students can apply the techniques to topics such as customer segmentation, consumer and market research, credit worthiness and risk assessment etc and learn how to make better business decisions. The course includes topics dealing with ANOVA, Linear and Logistic Regression, Decision trees, Clustering and Segmentation using **SAS®** (Enterprise Guide and Enterprise Miner).

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the role of Predictive Analytics in various industries,

CO2: Understand comprehensive knowledge of Predictive Analytics and Pattern Discovery,

CO3: Apply SAS® (SAS Studio and SAS Enterprise Miner) to carry out data analyses,

CO4: Select appropriate methods of predictive analytics, given data and study objectives,

CO5: Assess model fit and implementation, and

CO6: Develop ability to view the topics of this course in a larger business/economic perspective.

Course Contents

Module 1: Introduction to Predictive Analytics

- Predictive Analytics in various industries
- Predictive Analytics Approach

Module 2: Introduction to SAS Studio and SAS Enterprise Miner

- SAS Studio Interface (Library, Folders)
- SAS Enterprise Miner Interface (SEMMA)

Module 3: Predictive Analytics using SAS Studio

- Multiple Linear Regression
- Predictive Regression Models
- GLM and Logistics Regression
- Rapid Predictive Modeler

Module 4: Predictive Analytics using SAS Enterprise Miner

- Cluster Analysis
- Market Basket Analysis
- Regression Models
- Decision Trees
- Neural Networks
- Comparing various Models and choosing the best model for a business problem

Software Tools

- SAS® STUDIO & SAS® ENTERPRISE MINER (Academic Version)

Textbook

No textbook. Course handouts.

Reference books

1. Parr-Rud, Olivia, Business Analytics Using SAS Enterprise Guide and SAS Enterprise Miner: A Beginner's Guide, SAS Institute, 2014, ISBN: 978-1612907833.
2. Elliott, Alan C., Woodward, Wayne A., SAS Essentials - Mastering SAS For Data Analytics|, Wiley Publications, 3rd Edition, 2023, ISBN: 978-1119901617.
3. Kumar, Dinesh U., Business Analytics: The Science of Data - Driven Decision Making, Wiley Publications, 2017, ISBN: 978-8126568772.
4. Sarma, Kattamuri S., Predictive Modelling with SAS Enterprise Min Practical Solutions for Business Applications, SAS Institute, 3rd Edition, 2017, ISBN: 978-1629602646.

Text Mining and Analytics

Subject Code: BM62516
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Text is one of the major forms of data. It is overwhelmingly present in books, internet, reports and other documents with potentially host of information and knowledge hidden among them. These analyses can create potentially actionable knowledge.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the basic concepts of text analytics,

CO2: Understand a few techniques and tools which automatically process text and various levels of analysis,

CO3: Demonstrate and apply the outcomes of text analysis,

CO4: Analyze the nature and pattern of text as a data source for knowledge discovery,

CO5: Evaluate and compare analysis data with other data analysis, and

CO6: Develop ability to deal with multimedia data mining.

Course Contents

- Introduction to text analytics
- How to extract text data
- Basic natural language processing
- Text categorization and clustering,
- Document summary
- Sentiment analysis
- Social network and Social media analysis
- Text visualization.
- Audio visual data mining
- Open source tools and capabilities

Textbook

No textbook. Course handouts.

Reference books

1. Silge, Julia, Robinson, David, Text Mining with R – A tidy approach, O'Reilly Publications, 1st Edition, 2017, ISBN: 978-9352135769.
2. Sarkar, Dipanjan, Text Analytics with Python: A Practitioner's Guide to Natural Language Processing, Pearson Publications, 2nd Edition, 2019, ISBN: 978-1484243534.

Python for Data Science

Subject Code: BM62513
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Course Objective

Python programming has become one of the most popular languages for software development, particularly within the fields of data science, machine learning, artificial intelligence, and web development. The students will learn elements of the Python 3 language and development strategies by creating a complete program that performs a wide range of operations on a variety of data types, structures, and objects, implements program logic through conditional statements and loops, structures code for reusability through functions, classes, and modules, reads and writes files, and handles error conditions.

Course Outcomes

The learnings in the course will enable students to

CO1: Learn the different types of Python applications

CO2: Understand and remember the python commands to run program in IDE

CO3: Apply the concept of variables, data types, conditions and functions to create mini programs

CO4: Analyze the data structures, database and lists to generate the desired output

CO5: Evaluate various data wrangling and math operations using numpy and pandas library

CO6: Develop basic and advance data visualization using the matplotlib library

Course Contents:

1. **Introduction to Python and Beginning with Python**
   - What is Python
   - Python installation
   - Data types, variables, Input, output and operators in Python
   - Print, comment and formatting in Python
2. **Python Program Flow**
   - Indentation and grouping
   - If, If-Else, If, else, try and except
   - Iteration variable
   - While – indefinite loop
   - For – definite loop
   - Break and Continue statement
3. **Functions and Modules**
   - Function parameters and scope
   - Variable arguments
   - Calling a function
4. **Files Handling**
   - File handling modes
   - Reading files
   - Writing and appending to a file
   - Handling File exceptions
5. **Classes in Python**
   - Class and Object and their creation
   - Variables and Instance methods
   - Inheritance and Polymorphism
6. **Data Structures in Python**
   - List and Index
   - Range function
   - Manipulation and operation on a list
   - Nested List
   - Default parameters

7. **Dictionaries in Python**
    - Dictionary and its content
    - Predefined value in a Dictionary, population and operations on Dictionary
    - Using Keys in Dictionary for processing
8. **Tuples in Python**
9. **Database and SQL**
    - Creating a database
    - Creating tables, rows and column
    - Reading, Updation and deletion of Table structure and table data
    - Select, From, Where, Order By, Having clause
    - Wildcard values, Joins and conditions
10. **IDE for Data science in python**
    - Jupyter notebook
    - Code running and debugging in notebook
11. **Introduction to NumPy module**
    - Arrays in NumPy
    - Array Slicing and indexing
    - NumPy built-in functions
    - Perform math operations in NumPy
12. **Introduction to pandas module**
    - pandas fundamentals
    - pandas with csv data
    - pandas operations
    - pandas functions (data wrangling)
13. **Introduction to data visualization**
    - Principles of information visualization
    - Good visualization strategy
14. **Basic and advanced charting (Introduction to matplotlib library)**
    - Charting fundamentals
    - Data manipulation and charts
    - Interactive charts
    - Addressing a research question using data visualization

Textbook

Yuli Vasiliev, Python for Data Science, O'Reilly Publication, 3rd Edition, 2022, ISBN 9781718502208.

Reference Books:

1. Hameed, Python for Data Science, Wiley, 2021, ISBN 978-9354243479.
2. Motwani, Data Analytics using Python, Wiley, 2020, ISBN 978-8126502950.

Area: Information Technology Management

Area: Information Technology Management						
Sl. No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Credit**
Core Courses						
1	BM60601	Information Technology for Managers	2	0	0	**2**
Elective courses						
1	BM62603	IT Project Management	1.5	0	.5	**2**
2	BM62510	Machine Learning & Artificial Intelligence*	1.5	0	.5	**2**
3	BM62606	E-Business**	1.5	0	.5	**2**
4	BM62604	Internet of Things	1.5	0	.5	**2**
5	BM62605	Enterprise Resource Planning Systems**	1.5	0	.5	**2**
6	BM62503	Data Mining and Business Intelligence*	1.5	0	.5	**2**

*Courses offered in ITM and Business Analytics Area. Detailed syllabus found in Business Analytics Area Courses.

**Courses offered in the Operations and ITM Area.

Information Technology for Managers

Subject Code: BM60601
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

The course is supposed to cover five primary aspects, such as, Basics of computer hardware, software and number systems; Basics of Data storage and communication technologies; Business use of Information Technology: Primarily TPS, MIS and DSS; emerging Technologies; IT Privacy and Security.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the key parts of a computer and how they work together,

CO2: Explain the key concepts of data transmission,

CO3: Examine the difference between various IT systems such as MIS, DSS and TPS and explain the basics of Enterprise Systems,

CO4: Analyze Internet of Things (IoT) and Cloud Computing, and how theyare transforming business applications,

CO5: Evaluate the basics of IT Security and Privacy issues, including attacks and frauds andtheir mitigation, and

CO6: Develop ability to convert numbers between various number systems and perform basic arithmetic operations.

Course Contents

- **Number Systems:** Numbers systems conversions, binary and hexadecimal numbers, Basicarithmetic operations
- **Computing Environment and Data Storage:** History of computing, early computers, vacuum tubes, various computer generations, Parts of computer and memory including CPU, bus, peripherals, Basics of digital data storage, various primary and secondary memories, Role of operating systems, Various generations and types of computer software
- **Data Transmission:** Basics of digital transmission, networking technologies and physicaltransmission media, LAN, WAN and Internet Network topologies, and devices
- **Business use of IT:** Types of IT systems: TPS, MIS and DSS, and key features of each,Overview of Enterprise Systems such as ERP, CRM and SCM
- **New and Emerging Technologies:** Basics of Internet of things, wireless transmission technologies, and architecture, Opportunities and challenges in implementation, Cloudcomputing overview, and types of cloud services such as IaaS, PaaS and SaaS
- **IT Privacy and Security:** Information security challenges including viruses and worms, Trojans, hacking, denial of service, frauds, attacks, social engineering and phishing, Mitigations such as Firewall, Antivirus, VPN, Proxy and InfoSec policies, Evolving threatsand opportunities.

Textbook

Behl, Ramesh, Information Technology for Management, Business and Technology, McGraw Hill Publications, 2nd Edition, 2017, ISBN: 978-1259004797.

Reference books

1. Goel, Anita, Computer Fundamentals, Pearson, 1st Edition, 2010, ISBN: 978-8131733097.
2. O'Brien, James, Marakas, George M., Behl, Ramesh, Management InformationSystems, McGraw Hill Publications, 10th Edition, 2017, ISBN: 978-1259026713.
3. Velte, Anthony, Velte, Toby, Elsenpeter, Robert, Cloud Computing: A Practical Approach, McGraw Hill Publications, 1st Edition, 2017, ISBN: 978-0070683518.
4. Frye, Curtis D., MS Access: Plain and Simple, Microsoft Press US, 2010, ISBN: 978-0735627307.
5. Jawadekar, Waman S., Dubey, Sanjiva Shankar, Management Information Systems, McGraw Hill Publications, 6th Edition, 2020, ISBN: 978-9389949346.

IT Project Management

Subject Code: BM62603

Credit: 1.5-0-0.5 2

Prerequisite: Nil

Introduction

ITPM provides an overview of the roles, responsibilities, and management methods of thetechnology project manager. The course assumes no prior knowledge in management techniques and is intended to teach students how to develop approaches and styles of management for software projects and IT infrastructure projects. The course assumes a basic understanding of analysis techniques.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the key concepts of PM, SPM, ITPM,

CO2: Understand styles of management for software projects and IT infrastructure projects,

CO3: Demonstrate how IT projects are developed and managed effectively in digital firms, software research and development organizations,

CO4: Analyze various analysis techniques,

CO5: Assess approaches and styles of management for software projects and IT infrastructure projects, and

CO6: Develop ability to manage various processes of IT infrastructure Project management skills including PMP certification in future.

Course Contents

- Introduction to PM, SPM, ITPM
- Project Management and IT Context
- Project Management Process Groups
- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Human Resource Management in Projects
- Communication Management
- Project Risk Management
- Procurement Management

Textbook

Schwalbe, Kathy, Information Technology Project Management, Cengage, 8th Edition, 2015, ISBN: 978-1285452340.

Reference books

Hughes, Bob, Cotterell, Mike, Software Project Management, McGraw Hill Publications, 5th Edition, 2009, ISBN: 978-0077122799.

E-Business

Subject Code: BM62606
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Information Technology is profoundly changing how business is conducted. It has not only brought revolutionary changes in the business processes, but also spawned completely new and innovative business models that couldn't be imagined without

the use of IT. E-commerce, the most visible aspect of E-business, has completely changed the face of retail, at least in the larger cities, and has been making fast inroads into rural areas, riding on the wave low-cost, high-speed internet and online payment channels. Given the speed of business in the global competitive climate, an organization's strategy is only as good as its pace of implementation. This is where understanding the capabilities of IT and knowing how to use it optimally for competitiveadvantage is crucial for students of management.

Course Outcomes

At the end of the course, the students will be able to

CO1: Enumerate the various commercial and business models of businesses and how it dictates their IT initiatives,

CO2: Understand the entire E-business / E-commerce value chain including the role played by all the stakeholders in the online world,

CO3: Apply the various IT security risks to an E-business establishment,

CO4: Analyze the basic mechanism behind electronic payments and how it has affected businesses and created new models,

CO5: Infer key challenges in Marketing, Supply Chain Management, Procurement and CRM, and explain how IT is used to mitigate them, and

CO6: Develop ability to link an organization's strategy to likely technology initiatives / imperatives.

Course Contents

- **Introduction:** Context setting: Globalization and Information Economy, Data driven business, E-business and E-commerce basics
- **Technological Background.** Web evolution, Web technologies, Content Management Systems for Web-content hosting and E-commerce applications, Typical E-commerce architecture, 2 and 3-tier models, Use of Application Programming Interfaces (API), E- business Infra components
- **E-business Models.** E-business maturity model, intermediation and disintermediation, Revenue and Commercial Models, Online presence and value proposition, Intermediaries
- **E-business Strategy.** Generic Organization Strategies, IT as a driver of strategy: How does itget impacted? Investment, development, outsourcing decisions

- **Supply Chain Management and Procurement Systems.** SCM and Procurement Processes and Models, Value Chain Analysis of IT-enabled SCM processes, IT-enabled SCM strategy, Key adoption barriers and the role of IT
- **Technology-driven Marketing.** Online Promotion and Branding: Channels and Models, E- marketing strategies including Campaign Management, Tools and Technology platforms for E-marketing, Integration of Social Media
- **CRM Systems.** Customer Acquisition and Retention Management using integrated IT services, Strategy for social and crowd-sourced CRM
- **Online Payments and Security.** Online Payment Infrastructure and processes, Securing E- commerce transactions, Risks, frauds and attacks: Detection and prevention.

Textbook

Chaffey, Dave, E-business and E-commerce Management - Strategy, Implementation and Practice, Prentice Hall Publications, 5th Edition, 2011, ISBN: 978-0273752011.

Reference books

1. Bhanver, Jagmohan, Bhanver, Komal, Click!: The Amazing Story of India's E-Commerce Boom and Where it is Headed, Hachette, 2017, ISBN: 978-9351950271.
2. Stone, Brad, The Everything Store: Jeff Bezos and the Age of Amazon, Corgi Publications, 2014, ISBN: 978-0552167833.
3. Erisman, Porter, Alibaba's World: How a Remarkable Chinese Company is Changing the face of Global Business, Pan Macmillan India, Latest Edition, 2015, ISBN: 978-1447290643.

Internet of Things

Subject Code: BM62604
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The purpose of this course is to impart knowledge on Internet of Things (IoT), which relates to the study of sensors, actuators, and controllers, among other Things, IoT applications and examples overview (building automation, transportation, healthcare, industry, etc.) with a focus on wearable electronics. This course will impart knowledge on IoT challenges and security aspects.

Course Outcomes

At the end of the course, the students will be able to

CO1: Recall the basic concepts of Internet of Things (IoT),

CO2: Understand the applications of Internet of things in different sectors,

CO3: Apply Internet of Things (IoT) to the study of sensors, actuators, and controllers,

CO4: Analyze IoT challenges and security aspects,

CO5: Evaluate how easily Operational Technology (OT) can communicate with Information Technology (IT), and

CO6: Develop ability to integrate IoT Smart X Application.

Course Contents

- **Introduction.** The Internet of Things, Importance of IOT, Towards the IOT Universe IOT Strategic Research and Innovation Directions, IOT Applications, Future Internet Technologies, Infrastructure, Networks and Communication, Processes, Data Management, Security, Privacy & Trust, Device Level Energy Issues, IOT Related Standardization, Typical IOT Application, Trends & Implications
- **IOT Architecture.** Introduction, State of the art, Architecture Reference Model- Introduction, Reference Model and architecture, IOT reference Model, IOT Reference Architecture- Introduction, Functional View, Information View, Deployment and Operational View, Other Relevant architectural views.
- **IOT Applications.** Introduction, IOT applications for industry: Future Factory Concepts,Brownfield IOT, Smart Objects, Smart Applications, Four Aspects in your Business to Master IOT, Value Creation from Big Data and Serialization, IOT for Retailing Industry, IOT For Oil and Gas Industry, Opinions on IOT Application and Value for Industry, Home Management, eHealth.
- **Internet of Things Privacy, Security and Governance.** Introduction, Overview ofGovernance, Privacy and Security Issues, Contribution from FP7 Projects, Security, Privacy and Trust in IOT-Data-Platforms for Smart Cities, First Steps Towards a Secure Platform, Smartie Approach. Data Aggregation for the IOT in Smart Cities, Security.
- **Internet of Things Strategic Research & Innovation Agenda.** Internet of things of vision, IOT Strategic Research & Innovation Direction: IOT Application & Use case Scenario, IOT Functional View, Application Area,

- **IOT Smart X Application:** Smart Cities, Smart Energy & Smart Grid, Smart Mobility & transport, Smart Home, Smart Building & Infrastructure, Smart Factory & Manufacturing, Smart Health, Smart Logistics & Retails.

Textbook

Vermesan, Ovidiu, Friess, Peter, Internet of Things Applications - From Research andInnovation to Market Deployment, River Publications, 1st Edition, 2014, ISBN: 978-8793102941.

Reference books

1. Vermesan, Ovidiu, Friess, Peter, Internet of Things: Converging Technologies for Smart Environments and Integrated Ecosystems, River Publications, 1st Edition, 2015, ISBN: 978-8793237995.
2. Madisetti, Vijay, Bahga, Arshdeep, Internet of Things (A Hands- on-Approach), Orient Blackswan Private Limited - New Delhi, 1st Edition, 2015, ISBN: 978-8173719547.
3. Shelby, Zach, Bormann, Carsten, 6LoWPAN: The Wireless Embedded Internet, Wiley Publications, 1st Edition, 2011, ISBN: 978-0470747995.
4. Vasseur, Jean-Philippe M.S., Dunkels, Adam, Interconnecting Smart Objects with IP: The Next Internet, Morgan Kuffmann, 2010, ISBN: 978-0123751652.

Enterprise Resource Planning Systems

Subject Code: BM62605
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Enterprise resource planning systems (ERPS) is the integrated management of core business processes, often in real-time and mediated by software and technology.ERP provides an integrated and continuously updated view of core business processes using common databases maintained by a centralized database management system. The applications that make up the system share data across various departments (manufacturing, purchasing, sales, accounting, etc.) that provide the data. ERP facilitates information flow between all business functions and manages connections to outside stakeholders.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify business processes, in real-time and mediated by software and technology,

CO2: Understand core business processes,

CO3: Apply knowledge to get updated view of core business processes using common databases,

CO4: Analyze implementation strategies and outline phases,

CO5: Evaluate applications that make up the system share data across various departments, and

CO6: Develop ability to implement ERP (SAP) system throughvarious stages in an organization.

Course Contents

- ERP – Overview and general processes and architecture
- ERP – Implementation strategy and phases overview
- ERP – Implementation methodology
- ERP-SAP Overview and navigations through SAP ECC 6.0
- SAP Data - Organization data, Master Data and Transaction Data
- SAP - Material Management and Quality Assurance
- SAP - Plant Management
- SAP – Sales and Distribution, Billing, Shipping and Logistics
- SAP Lab – MM, SD, HR and FICO
- AS-IS and TO-BE, realization (Dev client and Test client)
- Preparation for Go-Live
- GoLive
- Post GoLive support.

Textbook

No prescribed textbook. SAP resources from SAP University Alliance will be provided.

Reference books

1. Williams, Glynn, Implementing SAP ERP Sales & Distribution, McGraw Hill Publications, Illustrated Edition, 2008, ISBN: 978-0071497053.
2. Shukla, Mukesh, SAP Materials Management, McGraw Hill Publications, 2nd Edition, 2012, ISBN: 978-1259028397.
3. Monk, Ellen F., Wagner, Bret J., Enterprise Resource Planning, Cengage, 2009, ISBN: 978-8131509678.
4. Leon, Alexis, ERP Demystified, McGraw Hill Publications, 2010, ISBN: 978-0123751652.

Area: Operation and Supply Chain Management

Sl. No.	Course Code	Subject	L	T	P	Credit
Core Courses						
1	BM60801	Production & Operations Management – I	1.5	0	0.5	2
2	BM62802	Production and Operations Management – II	1.5	0	0.5	2
Elective Courses						
1	BM62804	Total Quality Management	1.5	0	0.5	2
2	BM62803	Procurement Management	1.5	0	0.5	2
3	BM62805	Warehouse Management	1.5	0	0.5	2
4	BM62808	Logistics Management	1.5	0	0.5	2
5	BM62807	Managing Service Operations	1.5	0	0.5	2
6	BM62806	Project Management	1.5	0	0.5	2
7	BM62512	Supply Chain Analytics*	1.5	0	0.5	2
8	BM62809	Supply Chain Management	1.5	0	0.5	2
9	BM62606	E-Business**	1.5	0	0.5	2
10	BM62707	Blockchain Applications in Business***	1.5	0	0.5	2

11	BM62605	Enterprise Resource Planning Systems**	1.5	0	0.5	2
12	BM62811	Legal Aspects in Supply Chain Management	1.5	0	0.5	2

*Course offered in Operations and Business Analytics Area. Detailed Syllabus provided in Business Analytics Area courses.

**Courses offered in Operations and ITM Area. Detailed Syllabus provided in ITM Area Courses.

***Course is a part of General Management and Operations. Detailed Syllabus provided in General Management Courses.

Production & Operations Management – I

Subject Code: BM60801
Credit: 2-0-0 2
Prerequisite: Nil

Introduction

Production and Operations Management (POM) deals with the design and operation of the systemproducing goods and services. It explores the ways operations managers approach and analyze strategic decisions in operations with a focus on designing products and processes, allocating scarce resources to strategic alternatives, and long-range capacity and facility planning. These operations functions help in achieving the long-range broader organizational objectives.

Subsequent focus will be on medium and short-term planning and control activities. The pedagogy will strive to strike a balance between theoretical and practical perspectives in manufacturing and service organizations.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the elements of operations and supply chain management (OSCM),

CO2: Understand the various transformation processes in supply chains,

CO3: Apply operations management concepts for enhancing competitiveness along the dimensionsof cost, quality, flexibility and delivery,

CO4: Analyze projects using network-planning models,

CO5: Evaluate capacity alternatives in supply chains using decision trees, and

CO6: Develop ability to analyze common types of manufacturing layouts and develop layouts in non-manufacturingsetups.

Course Contents

- Operations Management for Competitive Advantage. Operations strategy and Competitiveness, Operations & the Value Chain – Introducing the Supply Chain Framework, Project Management, Product & Service Design – Importance of Design for Environment & Sustainability.
- Process Selection & Supply Chain Design. Forecasting in Operations & Supply Chain Management, Capacity Management– Site Selection & Location Analysis, Processes and Technologies – Process Selection & Design, Facilities Management – Facility Layout, Process Analysis – Job Design & Work Measurement.

Textbook

Chase, Richard B., Shankar, Ravi, Jacobs, Robert F., Operations and Supply Chain Management, TMH, 15th edition, 2018, ISBN 978-9353161170.

Reference books

1. Schroeder, Roger G., Operations Management, Irwin McGraw Hill, 7th Edition, 2020, ISBN-1260368106.
2. Mahadevan, B., Operations Management: Theory & Practice, Pearson, 3rd Edition, 2015, ISBN 978-9332547520.
3. Mohanty, R.P., Deshmukh, S.G., Advanced Operations Management, Pearson, 2003, ISBN: 8178087529.

Production & Operations Management – II

Subject Code: BM62802
Credit: 1.5-0-0.5 2
Prerequisite: Production & Operations Management - I

Introduction

Production and operations management (POM) deals with the design and operation of the systemproducing goods and services. It explores the ways operations managers approach and analyze strategic decisions in operations with a focus on designing products and processes, allocating scarce resources to strategic alternatives, and

long-range capacity and facility planning. These operations functions help in achieving the long-range broader organizational objectives. Subsequent focus will be on medium and short-term planning and control activities. The pedagogy will strive to strike a balance between theoretical and practical perspectives in manufacturing and service organizations.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the qualitative and collaborative techniques to forecast demand,

CO2: Understand sales and operations planning, inventory costs, material requirement planning (MRP) system,

CO3: Apply the techniques to forecast demand, apply process variations and analyze process quality using statistics,

CO4: Analyze MRP problems, employee schedules in the service sector, supply chain processes using value stream mapping,

CO5: Evaluate demand using quantitative forecasting models, and

CO6: Develop ability to analyze waiting line problems, modify supply chain processes through lean concepts.

Course Contents

- Planning and Controlling the Supply Chain (Part-1). Aggregate Sales and Operations Planning, Disaggregation & Master production schedule (MPS)
- Planning and Controlling the Supply Chain (Part-2). Inventory Management, Material requirements planning & Introduction to Enterprise Resource Planning (from MRP to ERP), Operations Scheduling
- Quality Management & Lean Supply Chains. Just-in-Time and Lean Production, Quality Management – SPC & SQC (focus on Six Sigma), Service Process & Waiting Line Management for Service Improvement, Synchronous Manufacturing and Theory of Constraints (TOC)

Textbook

Chase, Richard B., Shankar, Ravi, Jacobs, Robert F., Operations and Supply Chain Management, TMH, 15th edition, 2018, ISBN 978-9353161170.

Reference books

1. Schroeder, Roger G., Operations Management, Irwin McGraw Hill, 7th Edition, 2020, ISBN-1260368106.

2. Mahadevan, B., Operations Management: Theory & Practice, Pearson, 3rd Edition, 2015, ISBN 978-9332547520.
3. Mohanty, R.P., Deshmukh, S.G., Advanced Operations Management, Pearson, 2003, ISBN: 8178087529.

Total Quality Management

Subject Code: BM62804
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Total Quality Management (TQM) is not just quality control or quality assurance. Nor is it limited to the boundaries of a Total Quality Control System. It is a dynamic process with astrong philosophical base, which incorporates many of the concepts upon which Total Quality Control Systems are based. The emphasis is on involving everyone in the organization inactivities, which provide for continuous never-ending improvements. Quality activities are planned and managed into the system and are oriented towards the achievement of complete customer satisfaction. This course aims to give a broad understanding of the various concepts and techniques used in TQM.

Course Outcomes

At the end of the course, the students will be able to

CO1: Recall and relate the quality concepts as applied to projects of their choice,
CO2: Understand TQM concepts and recognize quality as a never-ending journey,
CO3: Apply knowledge in new situations,
CO4: Analyze and relate TQM with the foundational components of operations management – namely,product development, process design & management and supply chain management,
CO5: Evaluate the importance of design thinking with the teachings of quality gurus, and
CO6: Integrate TQM with product lifecycle management (PLM).

Course Contents

- TQM & Design Thinking - An Overview
- Company Wide Quality Management
- Measurement of Quality (includes COQ; CSF approach)

- Tools for Quality Improvement (includes seven QC tools)
- Problem Solving and Systems Failure Analysis
- Employee Involvement and Empowerment
- Statistical Process Control
- Quality Function Deployment (voice of the customer)
- Taguchi Techniques
- KAIZEN: Concepts
- Quality Assurance Systems: A basic understanding.
- Total productive maintenance (TPM)

Textbook

Gryna, Frank, Chua, Richard, Defeo, Joseph, Quality Planning and Analysis, Cengage Learning, 5th edition, 2017, ISBN: 978-0070618480.

Reference books

1. Ross, P.J., Taguchi Techniques for Quality Engineering, McGraw Hill Publications, 2nd Edition, 2005, ISBN: 978-0070598805.
2. Ishikawa, Kaoru, Introduction to Quality Control, 3A Corporation, 1st Edition, 2012, ISBN: 978-9401176903.
3. Feigenbaum, A. V., Total Quality Control, McGraw Hill Publications, 3rd Edition, 1983, ISBN: 978-0070203532.
4. Bendell, Tony, Kelly, John, Merry, Ted, Quality Measuring and Monitoring, 1st Edition, 1993, ISBN: 978-0712655149.

Procurement Management

Subject Code: BM62803
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Although the word procurement or purchase implies to be a mere transaction involving a buyer and seller, it requires execution on multiple fronts such as technical, commercial, legal, interpersonal and managerial. Individuals with knowledge of the procurement process can reduce lapses in management or communication and ensure organizational success. To help professionals and students understand the process and perform better, this course focuses on delivering a comprehensive understanding of the management and practical aspects involved in procurement.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the concepts concerning the purchase cycle,

CO2: Explain the purchasing process with suitable examples,

CO3: Apply strategic sourcing techniques to frame a sourcing plan,

CO4: Analyse an existing procurement process and identify inconsistencies/ merits,

CO5: Evaluate a given procurement process and reflect on possible optimization, and

CO6: Create a contract document for a sourcing project.

Course Contents

- Strategic Procurement
- Procurement Process
- Procurement and Supply Chain Management
- Competitive Bidding and Negotiation
- Make or Buy Decisions
- Price and Cost Analysis
- Quality and Inventory
- Supplier Selection
- Supplier Development and Certification
- Services Procurement
- e-Procurement
- Involving Users and Suppliers
- Risk management in procurement management

Textbook

Johnson, Fraser P., Leenders Michiel, Flynn, Anna, Purchasing and Supply Management, McGraw Hill Publications, 14th Edition, 2010, ISBN: 978-0073377896.

Reference books

1. Alenka, Triplat, Schuh, Christian, Weise, Daniel, Schnellbacher, Wolfgang, Profit from the Source: Transforming Your Business by Putting Suppliers at the Core, Harvard Business Review Press, 2022, ISBN: 978-1647821395.
2. Lysons, Kenneth, Farrington, Brian, Procurement and Supply Chain Management, Pearson Publications, 10th Edition, 2020, ISBN: 978-1292317915.

Warehouse Management

Subject Code: BM62805
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course explains the dynamics of warehouse management's principles, concepts, and techniques as they relate to the entire supply chain, including customer demand, distribution, and product transformation processes. The inter-relationships of all functions are examined. Emphasis is placed on the ramifications of inventory management. The methods and techniques for reducing the cost of holding goods while providing an efficient and effective service to their customers are covered.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the methods used by organizations to obtain the right quantities of stock or inventory,

CO2: Comprehend the dynamics of inventory management's principles, concepts, and techniques as they relate to the entire supply chain (customer demand, distribution, and product transformation processes),

CO3: Apply the warehousing and inventory management principles,

CO4: Analyse principles given contexts and identify inconsistencies and optimization opportunities,

CO5: Evaluate the inventory management and warehousing system and reflect on the appropriateness of the same, and

CO6: Develop an inventory management system for a business unit.

Course Contents

Module-1

Introduction to Inventory – Definition, principles, role, functions and importance of Inventory, Types of Inventories, Inventory Policy, Costs Associated with Inventory, Inventory and Profitability, Impact of Inventory on total logical cost – Inventory management – objectives/ importance, symptoms of poor inventory management, Improving effectiveness of inventory management.

Module-2

Inventory Control and models – Importance and scope of Inventory control, Selective Inventory control, Inventory Models – Economic Lot size, EOQ, Economic Batch Quantity [EBQ], ROL – reorder level, P model, Q model, two bin system, fair share allocation model, MRP, ABC analysis, Just in Time (JIT). Modern methods Kanban, DRP and ERP.

Module-3

Inventory Methods – Inventory ranking methods and Quadrant technique, FIFO. LIFC, Weighted average method, Inventory under certainly and uncertainly, Risk Management, Work in progress inventories, Finished Goods Inventories, Spare parts inventories, Use of Computers in Inventory Management – RFID, EDI, Satellite tracking system.

Module-4

Warehouse Management – Definition, Principles, Roles, Importance of Warehouses, Need for Warehousing, Warehouse selection and planning, functions and operations of a warehouse, Warehouse location, Area of Warehouse, Factors affecting warehousing cost, arehouse layout, Design principles.

Textbook

No textbook. Course handouts.

Reference books

1. Wild, Tony, Best Practice in Inventory Management, Wiley Publications, 1st Edition, 1998, ISBN: 978-0471253419.
2. Hadley, George F., Analysis of Inventory systems, PHI Publications, 2012, ISBN: 978-1258240233.
3. Naddor, Eliezer, Inventory System, Wiley Publications, 99th Edition, 1996, ISBN: 978-0471628309.
4. Buchan, Ernest J., Koenigsberg, Scientific Inventory Management, PHI Publications, 1963, ISBN: 978-0137959891.
5. Peterson R., Decision System for Inventory Management and Production, Wiley Publications, 1979, ISBN: 978-0471683278.
6. Wild, Tony, Inventory Management Explained: A focus on Forecasting, lot sizing, safety stock, and ordering systems, OPS Publications, Illustrated Edition, 2009, ISBN: 9780972763110.

Logistics Management

Subject Code: BM62808
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The course focuses on the definition, need and functions of distribution of products in the supply chain environment. As distribution trends vary across geographic locations around the globe, the Indian perspective of physical distribution is highlighted. It also touches the transportation function and its relationship with other business functions. The channels of distribution are well elucidated and the design, role and intermediary factors are analysed. Further, transportation management (modes/legal types etc.) and the costs associated with them are dealt with efficiently. Modern transport and transport security aspects are emphasized in the content. Order processing and utilization along with customer services are other modules which are addressed. The course also has coverage on the distribution control and evaluation, organization for distribution and its structure and addresses the complex distribution functions.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the concepts concerning inbound and outbound logistics,

CO2: Understand the role of marketing and physical distribution in logistics,

CO3: Apply the principles of logistics management,

CO4: Analyse principles given contexts and identify inconsistencies and optimization opportunities,

CO5: Evaluate given logistics solutions considering associated benchmarks, and

CO6: Develop a transportation model on source-destination optimization.

Course Contents

MODULE 1

Distribution – Definition – Need for physical distribution – functions of distribution – marketing forces affecting distribution. The distribution concept – System perspective. Physical distribution trends in India. Transportation: Scope – principles of transportation function – relationship of transportation to other business functions

MODULE 2

Channels of distribution: role of marketing channels– channel functions channel structure designing distribution channel – choice of distribution channel factors affecting. Intermediaries: functions of intermediaries – types of intermediaries – variable s in selecting channel members – motivating – training – evaluating channel members – modifying channel arrangements.

MODULE 3

Transportation management: Legal types - Modes of transportation – Transport mode selection –methods –transportation costs, transport regulations– intra and inter-state transport of goods. Transport Industry in India - International Transport – Railways, Road transport, Ports – Transport Security -Trends in Modern Transpor

MODULE 4

Distribution control & Evaluation: Distribution control – stages of control process – standards & goals–performance report - measurement –monitoring–corrective action. Organization for Distribution: Distribution Organization structure – Private & Public organizations-conflict resolution–Rising costs & need for control – complexities of physical distribution. Transport organization: Functions – structure– hierarchy – Transport & Logistics organizations.

Textbook

No textbook. Course handouts.

Reference books

1. Ruston, Alan, Crouches, Phil, Baker, Peter, The Handbook of Logistics and Distribution Management, Kogan Page Publications, 6th Edition, 2017, ISBN: 978-0749476779.
2. Agrawal D. K., Distribution and Logistics Management: A Strategic Marketing Approach, Macmillan Publications, 2017, ISBN: 978-9351382751.
3. Kapoor, Satish K., Kansal, Purva, Basics of Distribution Management: A Logistical Approach, PHI Publications, 2004, ISBN: 978-8120321823.

Managing Service Operations

Subject Code: BM62807
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course explores the dimensions of successful service firms. It prepares students for roles in managing service operations and suggests creative entrepreneurial opportunities. Through case studies from a variety of industries (retail, banking, medical devices, hi-tech), and the sharing of professional experiences, students gain practical insights that can be readily applied in the workplace. In the first part of the course, we discuss service model, the customer and management systems. Later on the concepts of service journey, capacity, and demand management is discussed with emphasis on real-life applications. Also the course covers design thinking, specifically the service design toolset, including human-centred approaches such as blueprinting, customer journeys. The course material will integrate operations, marketing, strategy, information technology and organizational issues.

Course Outcomes

At the end of the course, the students will be able to

CO1: Describe service design methods and management processes,

CO2: Understand the unique challenges in managing excellent service operations,

CO3: Demonstrate and present in front of an audience,

CO4: Relate and achieve competitive advantage in services,

CO5: Evaluate analytical tools specific to service industries, and

CO6: Design and develop a new service using concepts taught in class.

Course Contents

- Module 1: Understanding Service Operations and Strategy, Distinctive characteristics of service Operations, Competitive service strategies and triple bottom line
- Module 2: New Service Development, Service design elements, service blueprinting, Service benchmark, Creating customer service orientation, Managing Services in B2B context
- Module 3: Design thinking for Service Design, Design Thinking Workshop for service design

- Module 4: Service Quality, SERVQUAL, Quality service by design, Cost of Quality, Quality tools for analysis and problem solving
- Module 5: Service Facility Location, Facility Location techniques, Supporting Facility and Process Flows
- Module 6: Managing Service Capacity and demand, Forecasting demand for services, Analytical queuing models, Yield Management

Textbook

Fitzsimmons, James A., Fitzsimmons, Mona J., Service Management: Operations, Strategy, Information Technology, McGraw Hill Publications, 8th edition, 2018, ISBN: 978-9353161149.

Reference books

1. Vinnie, Jauhari, Dutta, Kirti, Services: Marketing, Operations and Management, Oxford India, 2nd Edition, 2017, ISBN: 978-0199456161.
2. Johnston, Robert, Clark, Graham, Shulver, Michael, Service Operations Management: Improving Service Delivery, Pearson, 4th Edition, 2017, ISBN: 978-9386873309.

Project Management

Subject Code: BM62806
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

This course guides students through the fundamental project management tools and behavioral skills necessary to successfully launch, lead, and realize benefits from projects in profit and non-profit organizations. Students explore project management with a practical, hands-on approach through case studies and class exercises. Students are exposed to the various development stages of a project, such as, project initiation, project planning and design, project execution or production, project monitoring and controlling, and project completion. There will be a brief exposure to some modern approaches to project management, such as, critical chain project management (CCPM) based on the theory of constraints (TOC), agile project management. Students will understand the importance of Project Management across all avenues of work, from producing a Hollywood movie to constructing a skyscraper to upgrading IT systems. They will understand that PM skills are critical to most careers and that they can be applied at most businesses and professions.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify and use key performance metrics for project success,

CO2: Understand project management knowledge areas and process groups,

CO3: Demonstrate the use of appropriate network scheduling techniques,

CO4: Analyze and illustrate work breakdown structures (WBS) in a project application,

CO5: Evaluate and manage project cost, quality and delivery, and

CO6: Design project proposal and discuss the implementation of a proposed plan.

Course Contents

- Module 1: Introduction to Project Management, Project Lifecycle, Project Selection and Portfolio Management, MRD, PRD, QFD
- Module 2: Project Planning, Project Scope Document, Work Breakdown Structure
- Module 3: Project Scheduling, Network scheduling (precedence diagramming), PERT, CPM, Resource allocation, Project Crashing, Theory of Constraints (ToC), Critical Chain Project Management
- Module 4: Project Management tool/software demonstration, Demonstration of various project management software (Trello, Asana, Wrikeetc)
- Module 5: Project Cost Management, Cost Estimating techniques, Project Budgeting
- Module 6: Project Quality Management, Quality Planning, Quality Assurance, Quality Control
- Module 7: Project Risk Management, Risk breakdown Structure and Risk Management Plan, Risk Register, Qualitative and Quantitative Risk Analysis
- Module 8: Project Control and Monitoring, Earned Value Management
- Module 9: Modern approaches to project management, Agile methods, Lean Project Management

Textbook

Nicholas, John M., Steyn, Herman, Project Management for Engineering, Business and Technology, Routledge, 5th Edition, 2017, ISBN: 978-1138049529.

Reference books

1. Layton, Mark C., Ostermiller, Steven J., Agile Project Management For Dummies, For Dummies, 2nd Edition, 2017, ISBN: 978-1119405696.
2. Chandra, Prasanna, Projects: Planning, Analysis, Selection, Financing, Implementation and Review, McGraw Hill Publications, 9th Edition, 2019, ISBN: 978-8194113836.
3. Project Management Institute, A guide to the Project Management Body of Knowledge, 6th Edition, 2017, ISBN: 978-1628251845.

Supply Chain Management

Subject Code: BM62809
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

Supply Chain Management involves the flows of materials and information among all the firms that contribute value to a product, from the source of raw materials to end customers. Elements of supply chain management have been studied and practiced for some time in marketing, logistics, and operations management. This course integrates the different perspectives to develop an appreciation for the challenges in managing a supply chain. The focus is on broad understanding of how to manage a supply chain through use of various analytical tools and conceptual frameworks developed through practice.

Course Outcomes

At the end of the course, the students will be able to

CO1: Identify the supply chain agents at different levels and for various sectors,

CO2: Understand the importance of lean concepts, inventory cost and control through simulation,

CO3: Apply knowledge to implement the strategies for reducing bullwhip effect across the supply chain,

CO4: Analyze various supply chain elements through project work,

CO5: Evaluate supply chain network design of a company, and

CO6: Develop ability to build on supply chain planning and its relation to ERP.

Course Contents

- Supply Chain Performance;
- Supply Chain Drivers and Obstacles;
- Supply Chain Network Configuration;
- Planning & Managing Inventories in a Supply Chain;
- Managing Uncertainty in the Supply Chain;
- Sourcing Decision in a Supply Chain;
- Transportation: Role, Factors, Modes & Design Options;
- Coordination in the Supply Chain;
- Strategic Partnership and Trust in Supply Chain;
- Information technology & Supply chain.

Textbook

Coyle John J., Langley, John C., Jr., Novack, Robert A., Gibson, Brian J., Managing Supply Chains – A Logistics Approach, Cengage Learning, 10th edition, 2016, ISBN 978-1305859975.

Reference books

1. Leong, G., Tan, Keah – Choon, Wisner, Joel, Principles of Supply Chain Management - A Balanced Approach, Cengage Learning, 4th Edition, 2015, ISBN 978-1285428314.
2. Chandrasekaran, N., Operations Management: Process, Systems & Practices, OUP, 1st Edition, 2010, ISBN 978-0198063025.
3. Simchi-Levi, David, Kaminsky, Philip, Designing & Managing the Supply Chain, McGraw Hill Publications, 3rd Edition, 2007, ISBN: 978-0070666986.

Legal Aspect in Supply Chain Management

Subject Code: BM62811
Credit: 1.5-0-0.5 2
Prerequisite: Nil

Introduction

The course delves into legal aspects in Supply Chain Management in the first part. Contract logistics is a vital part of SCM. Key participants in supply chains may include manufacturers, distributors and providers of raw materials. It is imperative to understand and develop contracts which are legally binding. Vendor management

with various stakeholders includes developing a relationship by clearly defining terms and obligations. Further, like regular workers, contract right to social security is a kind of natural right. This course includes the relevant social security legislations which every employer and employee, regular and contractual, should be aware of.

The second part of the course deals with GST and its compliance requirements. GST replaced all indirect taxes in India and it's a great reform in the Indirect tax history of the country. It is very useful for creating a competing business environment in the country and also helpful in inviting the FDI to India by impressing upon the global corporate communities that business processes are getting simplified here. This course will be helpful to anyone looking to acquire basic knowledge of GST and upskill themselves with the technical skills.

Course Outcomes

At the end of the course, the students will be able to

CO1: Remember the important legislations affecting major stakeholders, basic concepts of corporate tax and GST,

CO2: Understand the process of registration, documentation and return filing,

CO3: Apply the legal concepts for better stakeholder management and concepts of tax planning in reducing tax burden for corporates,

CO4: Analyze the legalities in different situations, for supply valuation, GST estimation and refund computation,

CO5: Evaluate different verdicts pertaining to legal statutes, GST assessment, audit and prosecutions to frame ethical practices and streamline processes, and

CO6: Create checklists in relation to legal obligations, documentation, return filing, refund claiming, etc.

Course Contents

Module 1:

- Contract Labor (Regulation and Abolition) Act, 1970
    - Registration
    - Facilities for contractual workers – health, welfare
    - Developing a checklist for principal employer and contractor to deal with operational activities
    - Principal Employer's Responsibility towards Contractors in PF matters
- Industrial Employment (Standing Orders) Act, 1946

Module 2: Social Security Legislations

- Workmen Compensation Act, 1923
- EPF & Miscellaneous Provisions Act, 1952
- Payment of Gratuity Act, 1972
- Employees' State Insurance Act, 1948
- Maternity Benefit Act, 1961

Module 3: Introduction of GST

- Earlier indirect tax regime in India and introduction of GST
- Basic framework of GST, concept of supply under GST
- Various types of supplies (Inter-state, Intra-state, exempt, non-GST, composite and mixed supplies
- Application of GST, computation of value of supply for GST application
- Utilisation of input tax credit, restrictions on availing ITC, reconciliation of ITC

Module 4: GST Compliance and Claiming Refund

- GST compliance- registration procedure
- Return filing, Types of return and reporting requirement
- Refund claiming process, computations, documentations
- Concept of job work, responsibility of a job worker and the compliance required

Module 5: GST- Documentation, records, audit and assessment

- Maintenance of documents- e-invoicing, e-way bills, their generation, cancellation and reconciliation
- Types of statutory accounts and records, Key performance indicator and MIS reports
- Audit by government authorities, Assessment taxes and the appellate procedure
- Penalties of non-compliance and prosecution
- Anti-profiteering provisions and role of statutory bodies

Textbook

Padhi P. K., Labor And Industrial Laws, PHI Publications, 4th Edition, 2019, ISBN: 978-9388028936.

Reference books

1. Pillai K. M., Labour And Industrial Laws, Allahabad Law Agency, 18th Edition, 2017, ISBN: 978-8189532062.
2. Datey V. S., GST Ready Reckoner, Taxmann Publications, 16th Edition, 2021, ISBN: 978-9390831340.