

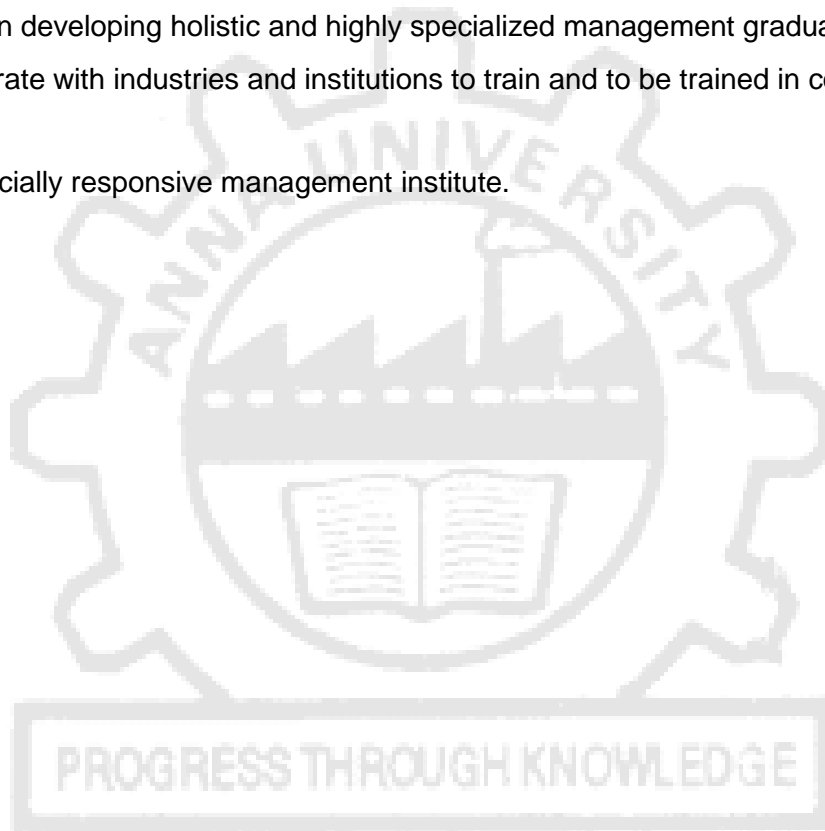
ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS
MASTER OF BUSINESS ADMINISTRATION (FT & PT)
REGULATIONS – 2019
CHOICE BASED CREDIT SYSTEM

VISION

To be an iconic management institute with a goal of developing competent and socially conscious management professionals

MISSION

- To focus on developing holistic and highly specialized management graduates.
- To collaborate with industries and institutions to train and to be trained in contemporary practices
- To be a socially responsive management institute.



Attested


DIRECTOR
Centre for Academic Courses
Anna University, Chennai-600 025

ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS
MASTER OF BUSINESS ADMINISTRATION (FT & PT)
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PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) :

MBA programme curriculum is designed to prepare the post graduate students

- I. To have a thorough understanding of the core aspects of the business.
- II. To provide the learners with the management tools to identify, analyze and create business opportunities as well as solve business problems.
- III. To prepare them to have a holistic approach towards management functions.
- IV. To motivate them for continuous learning.
- V. To inspire and make them practice ethical standards in business.

PROGRAMME OUTCOMES (POs):

On successful completion of the programme,

1. Ability to apply the business acumen gained in practice.
2. Ability to understand and solve managerial issues.
3. Ability to communicate and negotiate effectively, to achieve organizational and individual goals.
4. Ability to upgrade their professional and managerial skills in their workplace.
5. Ability to explore and reflect about managerial challenges, develop informed managerial decisions in a dynamically unstable environment.
6. Ability to take up challenging assignments.
7. Ability to understand one's own ability to set achievable targets and complete them.
8. Ability to pursue lifelong learning.
9. To have a fulfilling business career.
10. Ability to have financial literacy.
11. Ability to fulfill social outreach
12. Ability to understand business analytics

MAPPING OF PEOS WITH POS:

Programme Educational Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	3	2	1	3	3	1	2	1	1	1	3
II	1	3	1	2	3	1	3	2	1	3	1	3
III	3	3	2	3	3	2	3	3	3	1	2	3
IV	2	1	2	3	3	1	3	3	3	1	2	1
V	1	3	3	2	2	3	1	2	3	1	3	1

		COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	
YEAR 1	SEM 1	Statistics for Management		✓								
		Management Concepts and Organizational Behavior	✓		✓	✓						
		Managerial Economics	✓				✓	✓				
		Accounting for Decision Making		✓								
		Legal Aspects of Business	✓	✓	✓							
		Information Management	✓		✓	✓				✓	✓	
		Marketing Management	✓			✓					✓	
		Indian Ethos and Business Ethics Seminar				✓	✓				✓	
		Business Communications (Laboratory)			✓	✓				✓	✓	
	SEM 2	Quantitative Techniques for Decision Making		✓		✓						
		Financial Management		✓		✓		✓			✓	
		Human Resource Management	✓		✓	✓		✓		✓	✓	
		Operations Management	✓	✓		✓			✓			
		Business Research Methods		✓		✓			✓			
		Business Analytics		✓		✓					✓	
		Non-Functional Elective										
		Data Analysis and Business Modelling (Laboratory)		✓				✓	✓		✓	
		Rural Community Engagement	✓		✓		✓			✓	✓	
YEAR 2	SEM 3	Strategic Management	✓		✓	✓		✓		✓	✓	
		International Business	✓		✓		✓				✓	
		Creativity and Innovation Laboratory	✓	✓		✓		✓			✓	
		Elective I	Given below for each stream/Specialization									
		Elective II										
		Elective III										
	Elective IV											
	Elective V											
	Elective VI											
Summer Internship	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
SEM 4	Project work – 16 weeks Project Work + Maximum 4 weeks for report writing	✓	✓	✓	✓	✓	✓	✓	✓	✓		

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NON FUNCTIONAL ELECTIVES

SL. NO.	SUBJECT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1.	Entrepreneurship Development	✓			✓					
2.	Corporate Governance	✓		✓	✓				✓	
3.	Event Management				✓				✓	
4.	Micro and Small Business Management	✓			✓				✓	
5.	Fuzzy logic for Management Decision Making		✓			✓	✓	✓		
6.	Intellectual Property Rights				✓				✓	
7.	Sustainable Management	✓		✓	✓				✓	

FUNCTIONAL ELECTIVES

Sl. No.	SUBJECT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
Stream/ Specialization : Marketing Management										
1.	Retail Marketing				✓					✓
2.	Consumer Behavior	✓		✓	✓				✓	✓
3.	Integrated Marketing Communications				✓	✓				
4.	Services Marketing	✓		✓	✓					✓
5.	Sales and Distribution Management				✓					✓
6.	Product and Brand Management				✓					
7.	Digital Marketing		✓		✓	✓	✓	✓		
8.	International Marketing	✓			✓		✓			✓
9.	Marketing Analytics		✓		✓	✓	✓	✓	✓	
Stream/ Specialization : Financial Management										
10.	Security Analysis and Portfolio Management						✓		✓	✓
11.	Financial markets						✓		✓	
12.	Banking and Financial Services						✓		✓	
13.	Financial Derivatives						✓		✓	
14.	Financial Modelling			✓			✓	✓	✓	✓
15.	Business Analysis and Valuation			✓	✓		✓	✓	✓	
16.	International Finance						✓		✓	
17.	Behavioral Finance	✓					✓		✓	✓
18.	Fintech and Blockchain Applications in Finance			✓			✓	✓	✓	✓
Stream/ Specialization : Human Resource Management										
19.	Strategic Human Resource Management	✓			✓		✓		✓	✓
20.	Industrial Relations and Labour Legislations	✓			✓					✓
21.	Social Psychology	✓		✓	✓	✓			✓	
22.	Organizational, Design, Change and Development				✓		✓			✓
23.	Managerial Behavior and Effectiveness	✓		✓	✓	✓			✓	✓

24.	Negotiation and Conflict Management	✓		✓	✓	✓				✓
25.	Reward and Compensation Management				✓	✓			✓	
26.	Personal Effectiveness	✓		✓	✓	✓		✓	✓	✓
27.	International Human Resources Management				✓		✓		✓	
28.	Human Resource Analytics		✓		✓		✓	✓		
Stream/ Specialization : Business Analytics										
29.	Block Chain Technology				✓	✓	✓			
30.	Social media web Analytics		✓		✓	✓	✓	✓		✓
31.	Stochastic Modelling		✓			✓	✓	✓		
32.	Time Series Analysis		✓			✓	✓	✓		
33.	Multivariate data analysis		✓			✓	✓	✓		
34.	Data Mining for Business Intelligence		✓		✓				✓	✓
35.	Big Data Analytics		✓		✓	✓	✓	✓		
36.	Deep Learning & Artificial Intelligence			✓	✓	✓	✓	✓	✓	
37.	R Programming		✓			✓	✓	✓		
38.	Python Programming		✓			✓	✓	✓		
Stream/ Specialization : Operations Management										
39.	Supply Chain Management		✓		✓	✓				✓
40.	Quality Management	✓			✓				✓	✓
41.	Materials Management				✓					
42.	Services Operations Management	✓	✓	✓	✓	✓				✓
43.	Process Management	✓	✓		✓					
44.	Supply Chain Analytics		✓		✓	✓	✓	✓	✓	
45.	Project Management	✓	✓		✓					✓
46.	Product design				✓					✓
47.	Lean Six Sigma		✓		✓	✓	✓		✓	
48.	Enterprise Resource Planning	✓			✓				✓	✓
Stream/ Specialization : Systems Management										
49.	e-business			✓	✓				✓	✓
50.	Internet of Things				✓		✓		✓	✓
51.	Cloud computing				✓	✓			✓	
52.	Enterprise Resource Planning	✓			✓				✓	✓
53.	Software Project and quality management				✓	✓				
54.	Data Mining for Business Intelligence		✓		✓				✓	✓
55.	Big Data Analytics		✓		✓	✓	✓	✓		
56.	Deep Learning & Artificial Intelligence			✓	✓	✓	✓	✓	✓	
57.	R Programming		✓			✓	✓	✓		
58.	Python Programming		✓			✓	✓	✓		

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ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS
REGULATIONS – 2019
CHOICE BASED CREDIT SYSTEM
MASTER OF BUSINESS ADMINISTRATION (FULL – TIME)
CURRICULA AND SYLLABI FOR I TO IV SEMESTERS

SEMESTER - I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5101	Statistics for Management	PCC	3	0	0	3	3
2.	BA5151	Management Concepts and Organizational Behavior	PCC	3	0	0	3	3
3.	BA5152	Managerial Economics	PCC	3	0	0	3	3
4.	BA5102	Accounting for Decision Making	PCC	3	0	0	3	3
5.	BA5153	Legal Aspects of Business	PCC	3	0	0	3	3
6.	BA5103	Information Management	PCC	3	0	0	3	3
7.	BA5104	Marketing Management	PCC	3	0	0	3	3
PRACTICALS								
8.	BA5161	Indian ethos and business ethics (Seminar)	EEC	0	0	4	4	2
9.	BA5162	Business Communications (Laboratory)	EEC	0	0	4	4	2
TOTAL				21	0	8	29	25

SEMESTER – II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5201	Quantitative Techniques for Decision Making	PCC	3	0	0	3	3
2.	BA5202	Financial Management	PCC	3	0	0	3	3
3.	BA5251	Human Resource Management	PCC	3	0	0	3	3
4.	BA5203	Operations Management	PCC	3	0	0	3	3
5.	BA5252	Business Research Methods	PCC	3	0	0	3	3
6.	BA5204	Business Analytics	PCC	3	0	0	3	3
7.		Non-Functional Elective	PEC	3	0	0	3	3
PRACTICALS								
8.	BA5211	Data analysis and Business Modelling (Laboratory)	PCC	0	0	4	4	2
9.	BA5261	Rural Community Engagement	EEC	0	0	4	4	2
TOTAL				21	0	8	29	25

NOTE: In the second semester

Students need to choose one elective from the Non-Functional stream

Summer internship – minimum of 4 weeks of internship Training diary has to be submitted

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SEMESTER - III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5351	Strategic Management	PCC	3	0	0	3	3
2.	BA5301	International Business	PCC	3	0	0	3	3
3.		Elective I	PEC	3	0	0	3	3
4.		Elective II	PEC	3	0	0	3	3
5.		Elective III	PEC	3	0	0	3	3
6.		Elective IV	PEC	3	0	0	3	3
7.		Elective V	PEC	3	0	0	3	3
8.		Elective VI	PEC	3	0	0	3	3
PRACTICALS								
9.	BA5361	Creativity and Innovation Laboratory	EEC	0	0	4	4	2
10.	BA5311	Summer Internship	EEC	0	0	4	4	2
TOTAL				24	0	4	32	28

NOTE: In the third semester

Students need to choose -

Three electives from 2 functional streams for Dual Specialization

SEMESTER - IV

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1.	BA5411	Project Work	EEC	0	0	24	24	12
TOTAL				0	0	24	24	12

TOTAL NO. OF CREDITS: 90

PROGRESS THROUGH KNOWLEDGE

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ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS
REGULATIONS – 2019
CHOICE BASED CREDIT SYSTEM
MASTER OF BUSINESS ADMINISTRATION (PART TIME)
CURRICULA AND SYLLABI FOR I TO VI SEMESTERS

SEMESTER - I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5101	Statistics for Management	PCC	3	0	0	3	3
2.	BA5151	Management Concepts and Organizational Behavior	PCC	3	0	0	3	3
3.	BA5152	Managerial Economics	PCC	3	0	0	3	3
4.	BA5102	Accounting for Decision Making	PCC	3	0	0	3	3
PRACTICALS								
5.	BA5162	Business Communications (Laboratory)	EEC	0	0	4	4	2
TOTAL				12	0	4	16	14

SEMESTER - II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5201	Quantitative Techniques for Decision Making	PCC	3	0	0	3	3
2.	BA5202	Financial Management	PCC	3	0	0	3	3
3.	BA5251	Human Resource Management	PCC	3	0	0	3	3
4.	BA5203	Operations Management	PCC	3	0	0	3	3
PRACTICALS								
5.	BA5211	Data Analysis and Business Modelling (Laboratory)	PCC	0	0	4	4	2
TOTAL				12	0	4	16	14

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SEMESTER - III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5153	Legal Aspects of Business	PCC	3	0	0	3	3
2.	BA5103	Information Management	PCC	3	0	0	3	3
3.	BA5104	Marketing Management	PEC	3	0	0	3	3
4.		Non-Functional Elective	PEC	3	0	0	3	3
PRACTICALS								
5.	BA5161	Indian Ethos and Business Ethics (Seminar)	EEC	0	0	4	4	2
TOTAL				12	0	4	16	14

NOTE: Students need to choose one elective from the Non-Functional stream

SEMESTER – IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5252	Business Research Methods	PCC	3	0	0	3	3
2.	BA5204	Business Analytics	PCC	3	0	0	3	3
3.		Elective I	PEC	3	0	0	3	3
4.		Elective II	PEC	3	0	0	3	3
5.		Elective III	PEC	3	0	0	3	3
PRACTICALS								
6.	BA5261	Rural Community Engagement	EEC	0	0	4	4	2
TOTAL				15	0	4	19	17

**Summer internship – minimum of 4 weeks of internship
Training diary has to be submitted**

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SEMESTER – V

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	BA5351	Strategic Management	PCC	3	0	0	3	3
2.	BA5301	International Business	PCC	3	0	0	3	3
3.		Elective IV	PEC	3	0	0	3	3
4.		Elective V	PEC	3	0	0	3	3
5.		Elective VI	PEC	3	0	0	3	3
PRACTICALS								
6.	BA5361	Creativity and innovation laboratory	EEC	0	0	4	4	2
7.	BA5311	Summer Internship	EEC	0	0	4	4	2
TOTAL				15	0	8	23	19

NOTE: Students need to choose -
Three electives from 2 functional streams for Dual Specialization

SEMESTER - VI

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CONTACT PERIODS	CREDITS
PRACTICALS								
1.	BA5411	Project Work	EEC	0	0	24	24	12
TOTAL				0	0	24	24	12

TOTAL NO. OF CREDITS: 90

PROGRESS THROUGH KNOWLEDGE

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NON FUNCTIONAL ELECTIVES

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
1.	BA5071	Entrepreneurship Development	PEC	3	0	0	3	3
2.	BA5072	Corporate Governance	PEC	3	0	0	3	3
3.	TM5351	Event Management	PEC	3	0	0	3	3
4.	BA5073	Micro and Small Business Management	PEC	3	0	0	3	3
5.	BA5049	Fuzzy logic for Management decision making	PEC	3	0	0	3	3
6.	BA5050	Intellectual Property Rights	PEC	3	0	0	3	3
7.	BA5051	Sustainable Management	PEC	3	0	0	3	3

PROFESSIONAL ELECTIVES (PEC)

FUNCTIONAL ELECTIVES

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
Stream/ Specialization : Financial Management (9 subjects)								
1.	BA5001	Security Analysis and Portfolio Management	PEC	3	0	0	3	3
2.	BA5002	Financial Markets	PEC	3	0	0	3	3
3.	BA5003	Banking and Financial Services	PEC	3	0	0	3	3
4.	BA5004	Financial Derivatives	PEC	3	0	0	3	3
5.	BA5005	Financial Modelling	PEC	3	0	0	3	3
6.	BA5006	Business Analysis and Valuation	PEC	3	0	0	3	3
7.	BA5007	International Finance	PEC	3	0	0	3	3
8.	BA5008	Behavioral Finance	PEC	3	0	0	3	3
9.	BA5009	Fintech and Blockchain Applications in Finance	PEC	3	0	0	3	3

Stream/ Specialization : Operations Management (10 subjects)								
10.	BA5010	Supply Chain Management	PEC	3	0	0	3	3
11.	BA5011	Quality Management	PEC	3	0	0	3	3
12.	BA5012	Materials Management	PEC	3	0	0	3	3
13.	BA5013	Services Operations Management	PEC	3	0	0	3	3
14.	BA5014	Process Management	PEC	3	0	0	3	3
15.	BA5015	Supply Chain Analytics	PEC	3	0	0	3	3
16.	BA5016	Project Management	PEC	3	0	0	3	3
17.	BA5017	Product design	PEC	3	0	0	3	3
18.	BA5018	Lean Six Sigma	PEC	3	0	0	3	3
19.	BA5019	Robust Design	PEC	3	0	0	3	3
Stream/ Specialization : Marketing Management (9 subjects)								
20.	BA5020	Retail Marketing	PEC	3	0	0	3	3
21.	BA5021	Consumer Behavior	PEC	3	0	0	3	3
22.	BA5022	Integrated Marketing Communications	PEC	3	0	0	3	3
23.	BA5023	Services Marketing	PEC	3	0	0	3	3
24.	BA5024	Sales and Distribution Management	PEC	3	0	0	3	3
25.	BA5025	Product and Brand Management	PEC	3	0	0	3	3
26.	BA5026	Digital Marketing	PEC	3	0	0	3	3
27.	BA5027	International Marketing	PEC	3	0	0	3	3
28.	BA5028	Marketing Analytics	PEC	3	0	0	3	3
Stream/ Specialization : Human Resource Management (10 subjects)								
29.	BA5029	Strategic Human Resource Management	PEC	3	0	0	3	3
30.	BA5030	Industrial relations and labour legislations	PEC	3	0	0	3	3
31.	BA5031	Social Psychology	PEC	3	0	0	3	3
32.	BA5032	Organizational, design, change and development	PEC	3	0	0	3	3
33.	BA5033	Managerial Behavior and Effectiveness	PEC	3	0	0	3	3
34.	BA5034	Negotiation and conflict management	PEC	3	0	0	3	3
35.	BA5035	Reward and Compensation management	PEC	3	0	0	3	3

Attested



36.	BA5036	Personal effectiveness	PEC	3	0	0	3	3
37.	BA5037	International Human Resources Management	PEC	3	0	0	3	3
38.	BA5038	Human Resource Analytics	PEC	3	0	0	3	3
Stream/ Specialization : Systems (10 subjects)								
39.	BA5039	e-business	PEC	0	0	3	3	3
40.	BA5040	Internet of Things	PEC	0	0	3	3	3
41.	BA5041	Cloud Computing	PEC	0	0	3	3	3
42.	BA5042	Enterprise Resource Planning	PEC	3	0	0	3	3
43.	BA5043	Software Project and Quality Management	PEC	3	0	0	3	3
44.	BA5074	Data Mining for Business Intelligence	PEC	3	0	0	3	3
45.	BA5075	Big Data Analytics	PEC	3	0	0	3	3
46.	BA5076	Deep Learning and Artificial Intelligence	PEC	3	0	0	3	3
47.	BA5077	R Programming	PEC	3	0	0	3	3
48.	BA5078	Python Programming	PEC	3	0	0	3	3
Stream/ Specialization : Business Analytics (10 subjects)								
49.	BA5074	Data Mining for Business Intelligence	PEC	3	0	0	3	3
50.	BA5075	Big Data Analytics	PEC	3	0	0	3	3
51.	BA5076	Deep Learning and Artificial Intelligence	PEC	3	0	0	3	3
52.	BA5077	R Programming	PEC	3	0	0	3	3
53.	BA5078	Python Programming	PEC	3	0	0	3	3
54.	BA5044	Block Chain Technology	PEC	3	0	0	3	3
55.	BA5045	Social media web Analytics	PEC	3	0	0	3	3
56.	BA5046	Stochastic Modelling	PEC	3	0	0	3	3
57.	BA5047	Time Series Analysis		3	0	0	3	3
58.	BA5048	Multivariate data analysis	PEC	3	0	0	3	3

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OBJECTIVE:

- To learn the applications of statistics in business decision making.

UNIT I INTRODUCTION 9

Basic definitions and rules for probability, conditional probability independence of events, Baye's theorem, and random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.

UNIT II SAMPLING DISTRIBUTION AND ESTIMATION 9

Introduction to sampling distributions, sampling distribution of mean and proportion, application of central limit theorem, sampling techniques. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.

UNIT III TESTING OF HYPOTHESIS - PARAMETIRC TESTS 9

Hypothesis testing: one sample and two sample tests for means and proportions of large samples (z-test), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations. ANOVA one and two way

UNIT IV NON-PARAMETRIC TESTS 9

Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit. Sign test for paired data. Rank sum test. Kolmogorov-Smirnov – test for goodness of fit, comparing two populations. Mann – Whitney U test and Kruskal Wallis test. One sample run test.

UNIT V CORRELATION AND REGRESSION 9

Correlation – Coefficient of Determination – Rank Correlation – Regression – Estimation of Regression line – Method of Least Squares – Standard Error of estimate.

TOTAL:45 PERIODS**OUTCOMES:**

- To facilitate objective solutions in business decision making.
- To understand and solve business problems
- To apply statistical techniques to data sets, and correctly interpret the results.
- To develop skill-set that is in demand in both the research and business environments
- To enable the students to apply the statistical techniques in a work setting.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	3	2	2	1	1	2	1	1	3
CO2	3	3	1	3	2	3	1	2	2	1	1	3
CO3	3	2	1	2	2	2	1	1	1	1	1	3
CO4	3	2	1	3	2	3	1	2	2	1	1	2
CO5	3	3	1	3	2	3	1	2	2	1	1	2

REFERENCES:

1. Richard I. Levin, David S. Rubin, Masood H.Siddiqui, Sanjay Rastogi, Statistics for Management, Pearson Education, 8th Edition, 2017.
2. Prem. S. Mann, Introductory Statistics, Wiley Publications, 9th Edition, 2015.
3. T N Srivastava and Shailaja Rego, Statistics for Management, Tata McGraw Hill, 3rd Edition 2017.
4. Ken Black, Applied Business Statistics, 7th Edition, Wiley India Edition, 2012.
5. David R. Anderson, Dennis J. Sweeney, Thomas A.Williams, Jeffrey D.Camm, James J.Cochran, Statistics for business and economics, 13th edition, Thomson (South – Western) Asia, Singapore, 2016.
6. N. D. Vohra, Business Statistics, Tata McGraw Hill, 2017.

OBJECTIVES:

- To familiarize the students to the basic concepts of management in order to aid in understanding how an organization functions, and in understanding the complexity and wide variety of issues managers face in today's business firms.
- To acquaint the students with the fundamentals of managing business and to understand individual and group behaviour at work place so as to improve the effectiveness of an organization. The course will use and focus on Indian experiences, approaches and cases.

UNIT I NATURE AND THEORIES OF MANAGEMENT 9

Evolution of management Thought-Classical, Behavioral and Management Science Approaches Management- meaning, levels, management as an art or science, Managerial functions and Roles, Evolution of Management Theory- Classical era- Contribution of F.W.Taylor, Henri Fayol, Neo-Classical-Mayo & Hawthorne Experiments. • Modern era – system & contingency approach Managerial Skills.

UNIT II PLANNING AND ORGANISING 9

Planning - Steps in Planning Process - Scope and Limitations - Forecasting and types of Planning - Characteristics of a sound Plan - Management by Objectives (MBO) - Policies and Strategies - Scope and Formulation - Decision Making - Types, Techniques and Processes.

Organisation Structure and Design - Authority and Responsibility Relationships - Delegation of Authority and Decentralisation - Interdepartmental Coordination - - Impact of Technology on Organisational design - Mechanistic vs Adoptive Structures - Formal and Informal Organisation.Control: meaning, function, Process and types of Control.

UNIT III INDIVIDUAL BEHAVIOUR 9

Meaning of Organizational behavior, contributing disciplines, importance of organizational behavior, Perception and Learning - Personality and Individual Differences - Motivation theories and Job Performance - Values, Attitudes and Beliefs - Communication Types-Process - Barriers - Making Communication Effective.

UNIT IV GROUP BEHAVIOUR 9

Groups and Teams: Definition, Difference between groups and teams, Stages of Group Development, Group Cohesiveness, Types of teams, Group Dynamics - Leadership - Styles - Approaches - Power and Politics - Organisational Structure - Organisational Climate and Culture,Conflict: concept, sources, Types, Stages of conflict, Management of conflict Organisational Change and Development.

UNIT V EMERGING ASPECTS OF ORGANIZATIONAL BEHAVIOUR 9

Comparative Management Styles and approaches - Japanese Management Practices Organisational Creativity and Innovation - Organizational behavior across cultures - Conditions affecting cross cultural organizational operations, Managing International Workforce, Productivity and cultural contingencies, Cross cultural communication, Management of Diversity.

TOTAL: 45 PERIODS

OUTCOMES:

On completion of course, Students will develop

- CO1 Understanding of various management concepts and skills required in the business world
- CO2 In-depth knowledge of various functions of management in a real time management context
- CO3 Understanding of the complexities associated with management of individual behavior in the organizations
- CO4 Develop the skillset to have manage group behaviour in Organizations
- CO5 Insights about the current trends in managing organizational behavior

Attested

REFERENCES:

1. Andrew J. Dubrin, Essentials of Management, Thomson Southwestern, 10th edition, 2016.
2. Samuel C. Certo and S. Trevis Certo, Modern Management: Concepts and Skills, Pearson education, 15th edition, 2018.
3. Harold Koontz and Heinz Wehrich, Essentials of Management: An International, Innovation, And Leadership Perspective, 10th edition, Tata McGraw-Hill Education, 2015.
4. Charles W.L Hill and Steven L McShane, „Principles of Management, McGraw Hill Education, Special Indian Edition, 2017.
5. Stephen P. Robbins, Timothy A. Judge, Organisational Behavior, PHI Learning / Pearson Education, 16th edition, 2014.
6. Fred Luthans, Organisational Behavior, McGraw Hill, 12th Edition, 2013.
7. Don Hellriegel, Susan E. Jackson and John W, Jr Slocum, Management: A competency-Based Approach, Thompson South Western, 11th edition, 2008.
8. Heinz Wehrich, Mark V Cannice and Harold Koontz, Management- A global entrepreneurial perspective, Tata McGraw Hill, 12th edition, 2008.
9. Stephen P. Robbins, David De Cenzo and Mary Coulter, Fundamentals Of Management, Prentice Hall of India, 9th edition 2016.
10. McShane, Mary V. Glinow, Organizational Behavior, 8th Edition, Tata Mc Graw Hill, 2017.
11. Nelson, Quick, Khandelwal. ORGB – An innovative approach to learning and teaching. Cengage learning. 2nd edition. 2012
12. Robert Konopaske, John M Ivancevich, Michael T Matteson, Oranizational Behavior and Management, 11th edition, Tata McGraw Hill, 2017.
13. Udai Pareek, Understanding Organisational Behavior, 3rd Edition, Oxford Higher Education, 2011.
14. Jerald Greenberg, Behavior in Organizations, PHI Learning. 10th edition. 2011

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	2	2	1	1	1	2	2	1	1
CO2	3	2	3	3	2	2	1	1	2	2	1	2
CO3	2	3	3	3	2	3	2	1	1	2	2	1
CO4	3	2	3	2	1	2	2	2	1	1	2	1
CO5	2	3	2	3	3	1	1	3	1	2	2	1

BA5152

MANAGERIAL ECONOMICS

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OBJECTIVE :

- To introduce the concepts of scarcity and efficiency; to explain principles of micro economics relevant to managing an organization; to describe principles of macroeconomics to have the understanding of economic environment of business.

UNIT I INTRODUCTION

9

The themes of economics – scarcity and efficiency – three fundamental economic problems – society's capability – Production possibility frontiers (PPF) – Productive efficiency Vs economic efficiency – economic growth & stability – Micro economies and Macro economies – the role of markets and government – Positive Vs negative externalities.

UNIT II CONSUMER AND PRODUCER BEHAVIOUR

9

Market – Demand and Supply – Determinants – Market equilibrium – elasticity of demand and supply – consumer behaviour – consumer equilibrium – Approaches to consumer behaviour – Production – Short-run and long-run Production Function – Returns to scale – economies Vs diseconomies of scale – Analysis of cost – Short-run and long-run cost function – Relation between Production and cost function.

UNIT III PRODUCT AND FACTOR MARKET 9

Product market – perfect and imperfect market – different market structures – Firm’s equilibrium and supply – Market efficiency – Economic costs of imperfect competition – factor market – Land, Labour and capital – Demand and supply – determination of factor price – Interaction of product and factor market – General equilibrium and efficiency of competitive markets.

UNIT IV PERFORMANCE OF AN ECONOMY – MACRO ECONOMICS 9

Macro-economic aggregates – circular flow of macroeconomic activity – National income determination – Aggregate demand and supply – Macroeconomic equilibrium – Components of aggregate demand and national income – multiplier effect – Demand side management – Fiscal policy in theory.

UNIT V AGGREGATE SUPPLY AND THE ROLE OF MONEY 9

Short-run and Long-run supply curve – Unemployment and its impact – Okun’s law – Inflation and the impact – reasons for inflation – Demand Vs Supply factors –Inflation Vs Unemployment tradeoff – Phillips curve –short- run and long-run –Supply side Policy and management- Money market- Demand and supply of money – money-market equilibrium and national income – the role of monetary policy.

TOTAL: 45 PERIODS

OUTCOMES:

1. To introduce the concepts of scarcity and efficiency;
2. To explain principles of microeconomics relevant to managing an organization
3. To describe principles of macroeconomics
4. To have the understanding of economic environment of business.
5. To study about the policies that regulate economic variables

REFERENCES:

1. Paul A. Samuelson, William D. Nordhaus, Sudip Chaudhuri and Anindya Sen, Economics, 19th edition, Tata McGraw Hill, New Delhi, 2011
2. William Boyes and Michael Melvin, Textbook of economics, Biztantra, 7 th edition 2008.
3. N. Gregory Mankiw, Principles of Economics, 8 th edition, Thomson learning, New Delhi,2017.
4. Richard Lipsey and Alec Chrystal, Economics, 13th edition, Oxford, University Press, New Delhi, 2015.
5. Karl E. Case and Ray C. Fair, Principles of Economics, 12th edition, Pearson, Education Asia, New Delhi, 2017.
6. Panneerselvam. R, Engineering Economics, 2 nd Edition, PHI Learning, 2014.

Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	1	1	1	3	3	2	2	3	3	3	3
II	3	3	3	3	3	3	2	2	2	2	2	2
III	3	2	1	2	2	2	2	2	3	3	3	3
IV	3	3	3	3	3	3	1	1	1	2	2	2
V	3	3	3	2	2	1	2	2	2	2	3	3

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OBJECTIVE :

- Acquire a reasonable knowledge in accounts analysis and evaluate financial statements

UNIT I FINANCIAL ACCOUNTING 9

Introduction to Financial, Cost and Management Accounting – Generally accepted accounting principles– Double Entry System – Preparation of Journal, Ledger and Trial Balance Preparation of Final Accounts: Trading, Profit and Loss Account and Balance Sheet - Reading the financial statements .

UNIT II ANALYSIS OF FINANCIAL STATEMENTS 9

Financial ratio analysis, Interpretation of ratio for financial decisions- Dupont Ratios – Comparative statements - common size statements. Cash flow (as per Accounting Standard 3) and Funds flow statement analysis – Trend Analysis.

UNIT III COST ACCOUNTING 9

Cost Accounts – Classification of costs – Job cost sheet – Job order costing – Process costing – (excluding Interdepartmental Transfers and equivalent production) – Joint and By Product Costing – Activity Based Costing, Target Costing.

UNIT IV MARGINAL COSTING 9

Marginal Costing and profit planning – Cost, Volume, Profit Analysis – Break Even Analysis – Decision making problems -Make or Buy decisions -Determination of sales mix - Exploring new markets - Add or drop products -Expand or contract.

UNIT V BUDGETING AND VARIANCE ANALYSIS 9

Budgetary Control – Sales, Production, Cash flow, fixed and flexible budget – Standard costing and Variance Analysis – (excluding overhead costing) -Accounting standards and accounting disclosure practices in India.

TOTAL : 45 PERIODS**OUTCOMES :**

1. A thorough grounding of financial accounting concepts
2. Preparation of financial statement analysis
3. Understand the management and cost accounting techniques
4. Apply the management and cost accounting techniques for decision making
5. Assess the accountancy standards of practices in India

REFERENCES :

1. R. Narayanaswamy, Financial Accounting, PHI, sixth edition, 2017.
2. M.Y. Khan & P.K. Jain, Management Accounting, Tata McGraw Hill, 8th edition, 2018.
3. T.S. Reddy & A. Murthy, Financial Accounting, Margham Publications, 2014
4. Jan Williams, Susan Haka, Mark S bettner, Joseph V Carcello, Financial and Managerial Accounting - The basis for business Decisions, 18th edition, Tata McGraw Hill Publishers, 2017
5. Charles T. Horngren, Gary L.Sundem, David Burgstahler, Jeff Schatzberg, Introduction to Management Accounting, PHI Learning, 2014 , 16th edition.
6. Earl K. Stice& James D.Stice, Financial Accounting, Reporting and Analysis, 8th edition, Cengage Learning, 2015.
7. N.M. Singhvi, Ruzbeh J.Bodhanwala, Management Accounting – Text and cases,3rd edition PHI Learning, 2018
8. Ashish K. Battacharya, Introduction to Financial Statement Analysis, Elsevier, 2012.

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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	1	2	1	1	1	-	3	3	-	-
CO2	3	2	1	2	2	2	-	2	-	3	-	2
CO3	3	3	2	2	3	2	1	2	1	3	-	1
CO4	3	3	2	3	3	2	1	1	1	2	-	1
CO5	3	2	3	2	2	2	1	2	-	2	-	-

BA5153

LEGAL ASPECTS OF BUSINESS

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OBJECTIVE:

- The objective of this course is to familiarize the students with various laws that will help them to refine their understanding of how law affects the different aspects of business.

UNIT I COMMERCIAL LAW 9
THE INDIAN CONTRACT ACT 1872

Definition of contract, essentials elements and types of a contract, Formation of a contract, performance of contracts, breach of contract and its remedies, Quasi contracts - Contract Of Agency: Nature of agency, Creation and types of agents, Authority and liability of Agent and principal: Rights and duties of principal and agents, termination of agency.

THE SALE OF GOODS ACT 1930 Nature of Sales contract, Documents of title, risk of loss, Guarantees and Warranties, performance of sales contracts, conditional sales and rights of an unpaid seller -

NEGOTIABLE INSTRUMENTS ACT 1881: Nature and requisites of negotiable instruments. Types of negotiable instruments, liability of parties, holder in due course, special rules for Cheque and drafts, discharge of negotiable instruments.

UNIT II COMPANY LAW AND COMPETITION ACT 9

COMPANY ACT 1956&2013 Major principles – Nature and types of companies, Formation, Memorandum and Articles of Association, Prospectus, Power, duties and liabilities of Directors, winding up of companies, Corporate Governance.

Competition Act 2002 - Introduction, Definitions, Enquiry into Certain Agreements and Dominant Position of Enterprise and Combinations.

UNIT III INDUSTRIAL LAW 9

An Overview of Factories Act - Payment of Wages Act - Payment of Bonus Act - Industrial Disputes Act.

UNIT IV CORPORATE TAX & GST 9

Corporate Tax Planning, Corporate Taxes and Overview of Latest Developments in Indirect tax Laws relating to GST: An introduction including constitutional aspects, Levy and collection of CGST & IGST, Basic concept of time and value of supply, Input tax credit, Computation of GST Liability, Registration, Tax Invoice, Credit & Debit Notes, Electronic Way bill, Returns, Payment of taxes including Reverse Charge

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UNIT V CONSUMER PROTECTION ACT AND INTRODUCTION OF CYBER LAWS

9

Consumer Protection Act – Consumer rights, Procedures for Consumer grievances redressal, Types of consumer Redressal Machineries and Forums-- Cyber crimes, IT Act 2000 and 2002, Cyber Laws, Introduction of IPR Intellectual Property Laws- Introduction, Legal Aspects of Patents, Filing of Patent Applications, Rights from Patents, Infringement of Patents, Copyright and its Ownership, Infringement of Copyright, Civil Remedies for Infringement.– Copy rights, Trade marks, Patent Act. Introduction, Right to Information Act, 2005.

TOTAL: 45 PERIODS

OUTCOMES:

- CO1 Understand the fundamental legal principles in developing various contracts and commercial laws in the business world
- CO2 Identify the common forms of business associations and elements of Corporate Governance
- CO3 Develop insights regarding the laws related to industrial environment
- CO4 Ability to understand the fundamentals of corporate tax and GST
- CO5 Understand the role of consumer rights and cyber laws in the modern business environment

REFERENCES :

1. N. D. Kapoor, Elements of Mercantile Law, Sultan Chand and Company, India, 2017.
2. P. K. Goel, Business Law for Managers, Biztantatara Publishers, India, 2017.
3. Akhileshwar Pathak, Legal Aspects of Business, Tata McGraw Hill, 6th Edition 2018.
4. Ravinder Kumar, Legal Aspects of Business, New Delhi: Cengage Learning, 4th edition, 2016.
5. Sinha P.K, Dr. Vinod Singhania, Text Book of Indirect Tax, Taxman Publication, New Delhi
6. Taxmann, GST Manual with GST Law Guide & Digest of Landmark Rulings, 11th Edition, 2019
7. P. P. S. Gogna, Mercantile Law, S. Chand & Co. Ltd., India, Fourth Edition, 2015.
8. Dr. Vinod K. Singhania, Direct Taxes Planning and Management, 11 th, 2007.
9. Richard Stim, Intellectual Property- Copy Rights, Trade Marks, and Patents, Cengage Learning, 15th edition 2017.
10. Daniel Albuquerque, Legal Aspect of Business, Oxford, 2nd edition, 2017
11. Ravinder Kumar– Legal Aspect of Business.– Cengage Learning, 4th Edition-2016.
12. V.S. Datey, GST Ready Reckoner, 9th edition, 2019

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	1	2		3	3	2	1	1
CO2	3	3	2	3	2	1	1	3	1	1	1	2
CO3	2	3	3	2	2	1	1	3	2	2	2	1
CO4	3	3	3	2	2	2	1	2	1	2	1	1
CO5	3	2	1	3	2	2	2	3	2	1	2	1

BA5103

INFORMATION MANAGEMENT

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OBJECTIVES :

- To understand the importance of information in business
- To know about the recent information systems and technologies.

UNIT I INTRODUCTION

Data, Information, Information System, evolution, types based on functions and hierarchy, Enterprise and functional information systems.

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UNIT II SYSTEM ANALYSIS AND DESIGN 10

System development methodologies, Systems Analysis and Design, Data flow Diagram (DFD), Decision table, Entity Relationship (ER), Object Oriented Analysis and Design(OOAD), UML diagram.

UNIT III DATABASE MANAGEMENT SYSTEMS 8

DBMS – types and evolution, RDBMS, OODBMS, RODBMS, Data warehousing, Data Mart, Data mining.

UNIT IV INTEGRATED SYSTEMS, SECURITY AND CONTROL 9

Knowledge based decision support systems, Integrating social media and mobile technologies in Information system, Security, IS Vulnerability, Disaster Management, Computer Crimes, Securing the Web.

UNIT V NEW IT INITIATIVES 9

Introduction to Deep learning, Big data, Pervasive Computing, Cloud computing, Advancements in AI, IoT, Block chain, Crypto currency, Quantum computing

TOTAL : 45 PERIODS

OUTCOMES :

- Learn the basics of data and information system.
- Understand the system development methodologies.
- Understand database management system and its types.
- Learn the various technologies in information system and its security.
- Gains knowledge on effective applications of information systems in business.

REFERENCES :

1. Robert Schultheis and Mary Sumner, Management Information Systems – The Manager’s View, Tata McGraw Hill, 2008.
2. Kenneth C. Laudon and Jane P Laudon, Management Information Systems – Managing the Digital Firm, 15 th edition, 2018.
3. Panneerselvam. R, Database Management Systems, 3rd Edition, PHI Learning, 2018.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	3	2	1	3	3	2	1	2	1
CO2	3	2	2	1	1	2	2	3	3	1	2	2
CO3	3	3	2	2	1	1	1	2	3	1	2	3
CO4	2	1	3	2	3	1	1	2	3	2	3	1
CO5	2	2	1	1	3	3	3	2	1	1	2	3

BA5104

MARKETING MANAGEMENT

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OBJECTIVE:

- To understand the changing business environment and the fundamental premise underlying market driven strategies.
- To identify the indicators of management thoughts and practices.

UNIT I INTRODUCTION 9

Defining Marketing – Core concepts in Marketing – Evolution of Marketing – Marketing Planning Process – Scanning Business environment: Internal and External – Value chain – Core Competencies – PESTEL – SWOT Analysis – Marketing interface with other functional areas – Production, Finance, Human Relations Management, Information System – Marketing in global environment – International Marketing – Rural Marketing – Prospects and Challenges.


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OBJECTIVES :

- To enable the learners in understanding of the basic concepts of Indian Ethos and familiarise about ethical behaviour and value systems at work.
- To enable the learners to have exposure on business ethics and ethical business perspectives.

NOTE :

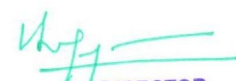
- The following is the list of topics suggested for preparation and presentation by students twice during the semester.
- This will be evaluated by the faculty member(s) handling the course and the final marks are consolidated at the end of the semester. No end semester examination is required for this course.
 - 1) Indian Ethos and Personality Development
 - 2) Work ethos and values for Professional Managers
 - 3) Indian Values, Value Systems and Wisdom for modern managers
 - 4) Management Lessons from the Vedas, Puranas, Indian religions
 - 5) Spirituality in Business Management
 - 6) Individual Culture and Ethics
 - 7) Ethical codes of conduct and value Systems
 - 8) Loyalty and Ethical Behaviour
 - 9) Ethical business issues and solutions
 - 10) Social Responsibilities of Business

TOTAL : 60 PERIODS**OUTCOMES :****After the completion of the course, the students will be able to:**

- CO1. The learners are able to apply the basic concepts of Indian ethos and value systems at work.
- CO2. The learners can handle issues of business ethics and offer solutions in ethical perspectives
- CO3. The learners are professionally efficient and skilful in value systems and culture
- CO4. The learners are capable in ethically manage business towards well being of the society.
- CO5. The learners can be socially effective in undertaking business responsibilities.

Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	2	3	2	2	3	3	2	3	2	3	2
II	2	1	2	3	1	3	2	2	3	3	3	3
III	1	3	2	1	2	2	3	3	2	3	2	2
IV	3	2	1	2	2	1	2	3	2	3	2	2
V	3	2	2	3	2	3	1	2	3	2	2	3

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OBJECTIVES:

- To help the students to acquire some of the necessary skills to handle day-to-day managerial responsibilities, such as - making speeches, controlling one-to-one communication, enriching group activities and processes, giving effective presentations, writing letters, memos, minutes, reports and advertising, and maintaining one's poise in private and in public,

UNIT I INTRODUCTION AND TYPES OF BUSINESS COMMUNICATION

Introduction to Business Communication: Principles of effective communication, Target group profile, Barriers of Communication, Reading Skills, Listening, Feedback. - Principles of Nonverbal Communication: Professional dressing and body language. Role Playing, Debates and Quiz. Types of managerial speeches - Presentations and Extempore - speech of introduction, speech of thanks, occasional speech, theme speech. - Group communication: Meetings, group discussions. - Other Aspects of Communication: Cross Cultural Dimensions of Business Communication Technology and Communication, Ethical & Legal Issues in Business Communication.

UNIT II BUSINESS COMMUNICATION WRITING MODELS AND TOOLS

Business letters, Routine letters, Bad news and persuasion letters, sales letters, collection letters, Maintaining a Diary, Resume/CV, job application letters, proposals. Internal communication through - notices, circulars, memos, agenda and minutes, reports. Case Studies. Exercises on Corporate Writing, Executive Summary of Documents, Creative Writing, Poster Making, Framing Advertisements, Slogans, Captions, Preparing Press Release and Press Notes

UNIT III EFFECTIVE PRESENTATIONS

Principles of Effective Presentations, Principles governing the use of audiovisual media.

UNIT IV INTERVIEW SKILLS

Mastering the art of giving interviews in - selection or placement interviews, discipline interviews, appraisal interviews, exit interviews, web /video conferencing, tele-meeting.

UNIT V REPORT WRITING

Objectives of report, types of report, Report Planning, Types of Reports, Developing an outline, Nature of Headings, Ordering of Points, Logical Sequencing, Graphs, Charts, Executive Summary, List of Illustration, Report Writing.

Note: The emphasis of the entire subject should be on practical aspects.

Practical: Module 1-This module introduces both written and spoken communication skills to students to build their confidence in delivering clear and logical messages to their audience. They will develop written communication skills through crafting business messages such as business letters, emails, and meeting minutes. In addition, students will work through presentations and simulated meetings to refine their spoken communication skills, discussion techniques and people skills.

Practical - Module 2-This module builds on the foundation of Business Communication 1 and creates opportunities for students to strengthen their oral and written communication. Students will be required to enhance their presentation skills through impromptu speeches. Students will also learn how to prepare a formal business report. Job hunting and employment skills will be introduced to prepare students for a positive start to their careers. Students will be taught to write application letters and resumes. Additionally, students will learn job interview techniques through role-plays and simulations

Practical - Module 3-This practical module aims to help students be persuasive in the business world. Students will learn listening and data gathering skills to better

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understand their target audience's needs and requirements and persuasive skills to convince the audience to accept a new policy/suggestion/product through role-playing a boardroom presentation. Students will also be taught business networking skills including conversation techniques, dining etiquette and personal branding through role-plays and simulations.

TOTAL : 60 PERIODS

OUTCOMES :

- CO1: Develop good managerial communication skills
- CO2: Ability to excel in different forms of written communication required in a business context
- CO3: Develop good presentation skills
- CO4: In-depth understanding of interview skills
- CO5: Ability to prepare Business reports

REFERENCES :

1. Rajendra Pal, J.S. Korlahalli ,Essentials of Business Communication by, Sultan Chand & Sons, 13th Edition
2. Meenakshi Raman, Prakash Singh ,Business Communication by, Oxford, 2nd edition,2012
3. Raymond V. Lesikar, Flatley, Basic Business Communication Skills for Empowering the Internet Generation by, M.E., TMGH , New Delhi , 10th edition, 2004
4. Ludlow R , Panton ,The Essence of Effective Communications , Prentice Hall of India Pvt. Ltd. 2, 1995
5. C. S. Rayadu , Communication by, HPH, 2015
6. R. C. Sharma , Krishna Mohan ,Business Correspondence & Report Writing , Tata McGraw Hill, 5th Edition, 2017
7. Malcolm Goodale , Developing Communication Skills, 2nd Edition Professional Presentations, Cambridge University Press
8. Supplementary Reading Material Business Communication - Harvard Business Essentials Series, HBS Press
9. Adair,J , Effective Communication. , Pan Macmillan Excellence in Business Communication by Thill, J. V. &Bovee, G. L, McGraw Hill, New York. Business Communications: From Process to Product by Bowman, J.P. &Branchaw, P.P., Dryden Press, Chicago.

WEBSITES :

- www.businesscommunicationskills.com
- www.kcittraining.com
- www.mindtools.com
- www.businesscommunication.org

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	3	2	2	1	3	3	1	1	1
CO2	2	3	3	2	2	1	1	3	3	2	2	2
CO3	3	2	1	2	2	2	3	1	2	1	2	1
CO4	3	1	2	3	2	1	1	3	2	1	2	2
CO5	3	1	2	3	2	1	1	1	2	2	1	1

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OBJECTIVE:

- To apply quantitative techniques in modeling and solving business related problems.

UNIT I INTRODUCTION TO LINEAR PROGRAMMING (LP) 9

Relevance of quantitative techniques in management decision making. Linear Programming-formulation, solution by graphical and simplex methods (Primal - Penalty, Two Phase), Special cases. Sensitivity Analysis.

UNIT II LINEAR PROGRAMMING EXTENSIONS 9

Transportation Models (Minimising and Maximising Problems) – Balanced and unbalanced Problems – Initial Basic feasible solution by N-W Corner Rule, Least cost and Vogel's approximation methods. Check for optimality. Solution by MODI / Stepping Stone method. Case of Degeneracy. Transshipment Models.

Assignment Models (Minimising and Maximising Problems) – Balanced and Unbalanced Problems. Solution by Hungarian and Branch and Bound Algorithms. Travelling Salesman problem. Crew Assignment Models.

UNIT III DECISION AND GAME THEORIES 9

Decision making under risk – Decision trees – Decision making under uncertainty.

Game Theory-Two person Zero sum games-Saddle point, Dominance Rule, Convex Linear Combination (Averages), methods of matrices, graphical and LP solutions.

UNIT IV INVENTORY AND JOB SEQUENCING MODELS 9

Inventory Models – EOQ and EBQ Models (With and without shortages), Quantity Discount Models.

Job Sequencing algorithm (Johnson') - n jobs thro' 2 machines, n jobs thro' 3 machines and n jobs thro' m machines.

UNIT V QUEUING THEORY AND REPLACEMENT MODELS 9

Queuing Theory - single and Multi-channel models – infinite number of customers and infinite calling source.

Replacement Models-Individuals replacement Models (With and without time value of money) – Group Replacement Models.

TOTAL: 45 PERIODS**COURSE OUTCOMES****To understand the applications of**

1. Linear programming in product mix decisions
2. Transportation and assignment in logistics and job allocation scenarios
3. Game theory and heuristics of decision making in real time decisions
4. Inventory management and job sequencing in manufacturing context
5. Queuing and replacement theories in real time scenario optimisation

REFERENCES :

1. N. D Vohra, Quantitative Techniques in Management, TataMcgraw Hill, 2010.
2. G. Srinivasan, Operations Research – Principles and Applications, 2nd edition, PHI, 2011.
3. Paneerselvam R., Operations Research, Prentice Hall of India, Fourth Print, 2008.
4. Hamdy A Taha, Introduction to Operations Research, Prentice Hall India, Tenth Edition, Third Indian Reprint 2019.
5. Bernard W.Taylor III, Introduction to Management Science, 9th Edition, Pearson Ed.
6. Frederick & Mark Hillier, Introduction to Management Science – A Modeling and case studies approach with spreadsheets, Tata Mcgraw Hill, 2010.
7. Nagraj B, Barry R and Ralph M. S Jr., Managerial Decision Modelling with Spreadsheets, Second Edition, 2007, Pearson Education.

CO	Programme Outcomes												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	
I	3	3	3	3	3	3	3	3	3	2	1	1	
II	3	3	2	3	1	1	1	3	1	2	1	1	
III	3	3	2	3	1	1	1	3	1	2	1	1	
IV	3	3	2	3	2	1	1	3	1	2	1	1	
V	3	3	2	3	1	2	1	3	1	2	1	2	

BA5202

FINANCIAL MANAGEMENT

**L T P C
3 0 0 3**

OBJECTIVES:

Facilitate student

- Understand the operational nuances of a Finance Manager.
- Comprehend the technique of making decisions related to finance functions.

UNIT I FOUNDATIONS OF FINANCE 9

Introduction to finance- Financial Management – Nature, scope and functions of Finance, organization of financial functions, objectives of Financial management, Major financial decisions – Time value of money – features and valuation of shares and bonds – Concept of risk and return – single asset and of a portfolio.

UNIT II INVESTMENT DECISIONS 9

Capital Budgeting: Principles and techniques - Nature of capital budgeting- Identifying relevant cash flows - Evaluation Techniques: Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index - Comparison of DCF techniques - Concept and measurement of cost of capital - Specific cost and overall cost of capital.

UNIT III FINANCING AND DIVIDEND DECISION 9

Leverages - Operating and Financial leverage – measurement of leverages – degree of Operating & Financial leverage – Combined leverage, EBIT – EPS Analysis- Indifference point.

Capital structure – Theories – Net Income Approach, Net Operating Income Approach, MM Approach – Determinants of Capital structure.

Dividend decision- Issues in dividend decisions, Importance, Relevance & Irrelevance theories- Walter's – Model, Gordon's model and MM model. – Factors determining dividend policy – Types of dividend policies – forms of dividend.

UNIT IV WORKING CAPITAL MANAGEMENT 9

Principles of working capital: Concepts, Needs, Determinants, issues and estimation of working capital - Receivables Management - Inventory management – Cash management - Working capital finance : Commercial paper, Company deposit, Trade credit, Bank finance.

UNIT V LONG TERM SOURCES OF FINANCE 9

Indian capital market- New issues market- Secondary market - Long term finance: Shares, debentures and term loans, lease, hire purchase, venture capital financing, Private Equity.

TOTAL :45 PERIODS

OUTCOMES:

1. Identify the concepts of financial decision of an organisation
2. Recognize the time value of money
3. Learn the capital budgeting and cost of capital techniques
4. Understand how to decide the decision of capital structure and distribution of dividend
5. Assess the short-term and long-term sources of finance

Attested

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REFERENCES :

1. I M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 11th edition, 2018
2. M.Y. Khan and P.K.Jain Financial management, Text, Problems and cases Tata McGraw Hill, 8th edition, 2017.
3. AswathDamodaran, Corporate Finance Theory and practice, John Wiley & Sons, 2011.
4. James C. Vanhorne –Fundamentals of Financial Management– PHI Learning, 13th Edition, 2014.
5. Brigham, Ehrhardt, Financial Management Theory and Practice, 14th edition, Cengage Learning 2015.
6. Prasanna Chandra, Financial Management, 9th edition, Tata McGraw Hill, 2017.
7. Srivatsava, Mishra, Financial Management, Oxford University Press, 2012.

BA5251

HUMAN RESOURCE MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To provide knowledge about management issues related to staffing, training, performance, compensation, human factors consideration and compliance with human resource requirements.

UNIT I PERSPECTIVES IN HUMAN RESOURCE MANAGEMENT 9

Evolution of human resource management – The importance of the human capital – Role of human resource manager –Challenges for human resource managers - trends in Human resource policies – Computer applications in human resource management – Human resource accounting and audit.

UNIT II HUMAN RESOURCE PLANNING AND RECRUITMENT 9

Importance of Human Resource Planning – Forecasting human resource requirement – matching supply and demand - Internal and External sources- Organizational Attraction- Recruitment, Selection, Induction and Socialization- Theories, Methods and Process.

UNIT III TRAINING AND DEVELOPMENT 9

Types of training methods –purpose- benefits- resistance. Executive development programme – Common practices - Benefits – Self development – Knowledge management.

UNIT IV EMPLOYEE ENGAGEMENT 9

Compensation plan – Reward – Motivation – Application of theories of motivation – Career management – Mentoring - Development of mentor – Protégé relationships- Job Satisfaction, Employee Engagement, Organizational Citizenship Behavior: Theories, Models.

UNIT V PERFORMANCE EVALUATION AND CONTROL 9

Method of performance evaluation – Feedback – Industry practices. Promotion, Demotion, Transfer and Separation – Implication of job change. The control process – Importance – Methods – Requirement of effective control systems grievances – Causes – Implications – Redressal methods.

TOTAL: 45 PERIODS

OUTCOMES:

- Students would have gained knowledge on the various aspects of HRM
- Students will gain knowledge needed for success as a human resources professional.
- Students will develop the skills needed for a successful HR manager
- Students would be prepared to implement the concepts learned in the workplace.
- Students would be aware of the emerging concepts in the field of HRM

Attested


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REFERENCES :

1. Gary Dessler and Biju Varkkey, Human Resource Management, 14th Edition, Pearson Education Limited, 2015.
2. David A. Decenzo, Stephen.P.Robbins, and Susan L. Verhulst, Human Resource Management, Wiley, International Student Edition, 11th Edition, 2014.
3. Luis R.Gomez-Mejia, David B.Balkin, Robert L Cardy. Managing Human Resource. PHI Learning. 2012
4. Bernadin , Human Resource Management ,Tata Mcgraw Hill ,8th edition 2012.
5. Wayne Cascio, Managing Human Resource, McGraw Hill, 2015.
6. Ivancevich, Human Resource Management, McGraw Hill 2012.
7. Uday Kumar Haldar, Juthika Sarkar. Human Resource management. Oxford. 2012

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	2	2	2	1	1	2	1	1	1
CO2	3	3	2	3	2	2	2	2	3	1	2	1
CO3	3	3	3	3	3	3	2	2	3	1	2	1
CO4	3	3	2	3	3	2	2	2	2	1	1	1
CO5	3	3	1	2	2	2	2	2	2	1	1	1

BA5203**OPERATIONS MANAGEMENT****L T P C
3 0 0 3****OBJECTIVE:**

- To provide a broad introduction to the field of operations management and explain the concepts, strategies , tools and techniques for managing the transformation process that can lead to competitive advantage.

UNIT I INTRODUCTION TO OPERATIONS MANAGEMENT 9

Operations Management – Nature, Importance, historical development, transformation processes, differences between services and goods, a system perspective, functions, challenges, current priorities, recent trends. Operations Strategy – Strategic fit , framework. Productivity; World-class manufacturing practices

UNIT II OPERATIONS AND THE VALUE CHAIN 9

Capacity Planning – Long range, Types, Developing capacity alternatives, tools for capacity planning. Facility Location – Theories, Steps in Selection, Location Models. Sourcing and procurement - Strategic sourcing, make or buy decision, procurement process, managing vendors.

UNIT III DESIGNING OPERATIONS 9

Product Design - Criteria, Approaches. Product development process - stage-gate approach - tools for efficient development. Process - design, strategy, types, analysis. Facility Layout – Principles, Types, Planning tools and techniques.

UNIT IV PLANNING AND CONTROL OF OPERATIONS 9

Demand Forecasting – Need, Types, Objectives and Steps - Overview of Qualitative and Quantitative methods. Operations planning - Resource planning - Inventory Planning and Control. Operations Scheduling - Theory of constraints - bottlenecks, capacity constrained resources, synchronous manufacturing

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UNIT V QUALITY MANAGEMENT**9**

Definitions of quality, The Quality revolution, quality gurus; TQM philosophies; Quality management tools, certification and awards. Lean Management - philosophy, elements of JIT manufacturing, continuous improvement. Six sigma.

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1: Understanding of the evolution of operations management practices and world class manufacturing processes
 CO2: Knowledge about capacity planning, strategic sourcing and procurement in organizations
 CO3: Enhances the understanding of product development and design process
 CO4: Ability to forecast demand and overcome bottlenecks
 CO5: Provides insight to Quality management tools and practices.

REFERENCES :

1. Richard B. Chase, Ravi Shankar, F. Robert Jacobs, Operations and Supply Chain Management, McGraw Hill Education (India) Pvt. Ltd, 14th Edition, 2014.
2. Mahadevan B, Operations management: Theory and practice. Pearson Education India; 2015.
3. William J Stevenson, Operations Management, Tata McGraw Hill, 9th Edition, 2009.
4. Russel and Taylor, Operations Management, Wiley, 5th Edition, 2006.
5. Norman Gaither and Gregory Frazier, Operations Management, South Western Cengage Learning, 9th edition, 2015.
6. Cecil C. Bozarth, Robert B. Handfield, Introduction to Operations and Supply Chain Management, Pearson, 4th Edition, 2016.
7. Panneerselvam. R, Production and Operations Management, 3rd Edition, PHI Learning, 2012.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CO2	3	2	2	2	2	2	1	2	2	2	1	1
CO3	3	3	2	2	1	1	2	2	2	1	2	1
CO4	3	3	2	1	3	1	2	2	1	1	1	2
CO5	3	3	1	2	2	1	1	2	2	1	2	1

BA5252**BUSINESS RESEARCH METHODS****L T P C
3 0 0 3****OBJECTIVE:**

- To make the students of tourism understand the principles of scientific methodology in business enquiry, develop analytical skills of business research and to prepare scientific business reports.

UNIT I INTRODUCTION**9**

Business Research – Definition and Significance – the research process – Types of Research – Exploratory and causal Research – Theoretical and empirical Research – Cross –Sectional and time – series Research – Research questions / Problems – Research objectives – Research hypotheses – characteristics – Research in an evolutionary perspective – the role of theory in research.

UNIT II RESEARCH DESIGN AND MEASUREMENT**9**

Research design – Definition – types of research design – exploratory and causal research design – Descriptive and experimental design – different types of experimental design – Validity of findings – internal and external validity – Variables in Research – Measurement and scaling – Different scales – Construction of instrument – Validity and Reliability of instrument.

UNIT III DATA COLLECTION**9**

Types of data – Primary Vs Secondary data – Methods of primary data collection – Survey Vs Observation – Experiments – Construction of questionnaire and instrument – Types of Validity – Sampling plan – Sample size – determinants optimal sample size – sampling techniques – Sampling methods.

UNIT IV DATA PREPARATION AND ANALYSIS**9**

Data Preparation – editing – Coding –Data entry – Validity of data – Qualitative Vs Quantitative data analyses – Applications of Bivariate and Multivariate statistical techniques, Factor analysis, Discriminant analysis, Cluster analysis, Multiple regression and Correlation, Multidimensional scaling – Conjoint Analysis – Application of statistical software for data analysis.

UNIT V REPORT DESIGN, WRITING AND ETHICS IN BUSINESS RESEARCH**9**

Research report –Types – Contents of report – need for executive summary – chapterization – contents of chapter – report writing – the role of audience – readability – comprehension – tone – final proof – report format – title of the report – ethics in research – Ethics in research – Subjectivity and Objectivity in research.

TOTAL : 45 PERIODS**OUTCOMES :**

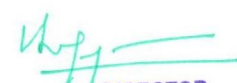
- Students will understand and appreciate scientific inquiry
- Students would know to write research proposals
- The students would be able to undertake a systematic outlook towards business situations for the purpose of objective decision making, and the method of conducting scientific inquiry to solve organizational problems
- Students would be able to analyze data and find solutions to the problems.
- Students could prepare research reports

REFERENCES :

1. Donald R. Cooper, Pamela S. Schindler and J K Sharma, Business Research methods, 11th Edition, Tata Mc Graw Hill, New Delhi, 2012.
2. Alan Bryman and Emma Bell, Business Research methods, 3rd Edition, Oxford University Press, New Delhi, 2011.
3. Uma Sekaran and Roger Bougie, Research methods for Business, 5th Edition, Wiley India, New Delhi, 2012.
4. William G Zikmund, Barry J Babin, Jon C.Carr, AtanuAdhikari, Mitch Griffin, Business Research methods, A South Asian Perspective, 8th Edition, Cengage Learning, New Delhi, 2012.
5. Panneerselvam. R, Research Methodology, 2nd Edition, PHI Learning, 2014.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	1	3	2	3	1	2	2	1	1	2
CO2	3	3	2	2	1	2	2	2	2	1	1	2
CO3	3	3	2	3	3	3	1	1	2	1	1	2
CO4	3	2	1	2	3	2	2	2	2	1	1	3
CO5	3	2	1	2	2	2	1	2	2	1	1	2

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OBJECTIVES:

Learn to

1. Use business analytics for decision making
2. To apply the appropriate analytics and generate solutions
3. Model and analyse the business situation using analytics.

UNIT I INTRODUCTION TO BUSINESS ANALYTICS (BA) 9

Business Analytics - Terminologies, Process, Importance, Relationship with Organisational Decision Making, BA for Competitive Advantage.

UNIT II MANAGING RESOURCES FOR BUSINESS ANALYTICS 9

Managing BA Personnel, Data and Technology. Organisational Structures aligning BA. Managing Information policy, data quality and change in BA.

UNIT III DESCRIPTIVE ANALYTICS 9

Introduction to Descriptive analytics - Visualising and Exploring Data - Descriptive Statistics - Sampling and Estimation - Probability Distribution for Descriptive Analytics - Analysis of Descriptive analytics

UNIT IV PREDICTIVE ANALYTICS 9

Introduction to Predictive analytics - Logic and Data Driven Models - Predictive Analysis Modeling and procedure - Data Mining for Predictive analytics. Analysis of Predictive analytics

UNIT V PRESCRIPTIVE ANALYTICS 9

Introduction to Prescriptive analytics - Prescriptive Modeling - Non Linear Optimisation - Demonstrating Business Performance Improvement.

TOTAL: 45 PERIODS**OUTCOMES:**

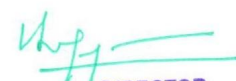
- CO1: Ability to understand the role of Business Analytics in decision making
 CO2: Ability to identify the appropriate tool for the analytics scenario
 CO3: Ability to apply the descriptive analytics tools and generate solutions
 CO4: Understanding of Predictive Analytics and applications
 CO5: Knowledge of Prescriptive Analytics and demonstrating business process improvement

REFERENCES

1. Marc J. Schniederjans, Dara G. Schniederjans and Christopher M. Starkey, " Business Analytics Principles, Concepts, and Applications - What, Why, and How" , Pearson Ed, 2014
2. Christian Albright S and Wayne L. Winston, "Business Analytics - Data Analysis and Decision Making", Fifth edition, Cengage Learning, 2015.
3. James R. Evans, "Business Analytics - Methods, Models and Decisions", Pearson Ed, 2012.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	3	2	2	1	3	2	1	2	2
CO2	3	2	2	3	2	2	1	3	2	2	1	1
CO3	3	3	1	3	2	2	2	3	2	1	2	1
CO4	3	3	2	3	3	2	2	3	2	1	1	2
CO5	3	3	2	3	2	2	2	3	2	1	2	1

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OBJECTIVE :

- to have hands-on experience on data analysis for business modeling.

S.No.	Exp. No.	Details of experiments	Duration
		Name	
1	1	Descriptive Statistics	4
2	2	Parametric Tests	4
3	3	Non-parametric Tests	4
4	4	Correlation & Regression	4
5	5	Forecasting	4
6	-	Extended experiment – 1	4
7	6	Portfolio Selection	4
8	7	Risk Analysis & Sensitivity Analysis	4
9	8	Revenue Management	4
10	-	Extended experiment – 2	4
11	9	Transportation & Assignment	4
12	10	Networking Models	4
13	11	Queuing Theory	4
14	12	Inventory Models	4
15	-	Extended experiments – 3	4

- Spreadsheet Software and Data Analysis Tools

TOTAL: 60 PERIODS**OUTCOMES :**

- CO1: Deep knowledge about the nature of data and conducting hypothesis testing using various data analysis techniques
- CO2: Facilitates to identify the relationship between variables using data analytical tools
- CO3: Provides understanding about forecasting in real time business world using analytical tools
- CO4: Ability to conduct Risk and sensitivity analysis and portfolio selection based on business data
- CO5: Enhances knowledge about networking, inventory models and queuing theory using data analytical tools

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REFERENCES :

1. David R. Anderson, et al, "An Introduction to Management Sciences: Quantitative approaches to Decision Making", (13th edition) South-Western College Pub, 2011.
2. William J. Stevenson, CeyhunOzgur, "Introduction to Management Science with Spreadsheet", Tata McGraw Hill, 2009.
3. Hansa Lysander Manohar, "Data Analysis and Business Modelling using Microsoft Excel" PHI, 2017.
4. David M. Levine et al, "Statistics for Managers using MS Excel" (6th Edition) Pearson, 2010.
5. Minnick, C. WebKit for Dummies. John Wiley & Sons, (2012).

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CO2	3	2	3	3	2	2	1	2	2	2	1	1
CO3	3	3	2	2	1	1	2	2	2	1	2	1
CO4	3	3	2	1	3	1	2	2	1	1	1	2
CO5	3	3	1	3	2	2	1	2	2	1	2	1

BA5261

RURAL COMMUNITY ENGAGEMENT

L T P C
0 0 4 2

OBJECTIVES:

- To provide practical opportunities for students to participate in rural community mobilization, service engagement and empowerment activities
- To promote preparation of strategies for building resilience and community responding system in nutrition including water, food safety and healthcare
- To orient the students into Village Development Plans and handling susceptibility of rural communities to impending emergencies arising out of natural and manmade disasters, climate variability

COURSE CONTENT :

1. **Dynamics of Rural Society:** Social, Economic, political and cultural **6**
2. **Community Goal setting :** Inner Engineering **6**
3. **Participatory Learning and social mapping:** Approaches and methods, community project proposal and project management, concept and steps, Thematic maps **12**
4. **Village development** including aspects and process of preparation of village disaster management plan **6**
5. **Resource Mapping:** Natural and Human resource mapping and management **6**
6. **Rural Institutions:** Engagement with school/ street/ Health centre/ Panchayat/ SHGs **6**
7. **Community Awareness:** Health & Hygiene/ Rights/ Policies & Programmes/ Corruptio **6**
8. **Disaster Management:** Disaster Preparedness- Risk reduction, Rehabilitation- Physical and Psychological aspects **6**
9. **Professional Intervention-** Partnership with Public, Private and Non-governmental organizations **6**

TOTAL: 60 PERIODS

OUTCOMES:

- CO1: Understand the social, economic, political and cultural framework of the rural society
CO2: Address the challenges with suitable solutions in the identified rural issues
CO3: Engage in rural community development programmes
CO4: Ability to create community awareness on health and hygiene and disaster management
CO5: Knowledge on establishing professional intervention

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REFERENCES:

1. Common core curriculum for Rural Engagement, National council of Rural Institutes, MHRD, GOI.
2. Katarsingh and Anil Shishodia, "Rural development: Principles, Policies and Management", Sage publications , 2016
3. A Azeez & S.M.J Akhtar, " Rural development in India", Kalpaz publications, 2016
4. Transforming rural India, Ministry of Rural Development, GOI.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CO4	2	2	3	2	3	3	2	3	1	1	1	2
CO5	2	3	2	2	3	2	2	3	2	1	2	1

BA5351

STRATEGIC MANAGEMENT

L T P C
3 0 0 3

OBJECTIVES :

- To learn the major initiatives taken by a company's top management on behalf of corporate, involving resources and performance in external environments. It entails specifying the organization's mission, vision and objectives, and to equip with skills required to manage business and non-business organizations at senior levels. The course adopts a functional approach to management developing policies and plan to understand the analysis and implementation of strategic management in strategic business units.

UNIT I STRATEGY AND PROCESS 9

Conceptual framework for strategic management, the Concept of Strategy and the Strategy Formation Process – Stakeholders in business – Vision, Mission and Purpose – Business definition, Objectives and Goals - Corporate Governance and Social responsibility-case study.

UNIT II COMPETITIVE ADVANTAGE 9

External Environment - Porter's Five Forces Model-Strategic Groups Competitive Changes during Industry Evolution-Globalisation and Industry Structure - National Context and Competitive advantage Resources- Capabilities and competencies–core competencies-Low cost and differentiation Generic Building Blocks of Competitive Advantage- Distinctive Competencies- Resources and Capabilities durability of competitive Advantage- Avoiding failures and sustaining competitive advantage-Case study.

UNIT III STRATEGIES 9

The generic strategic alternatives – Stability, Expansion, Retrenchment and Combination strategies - Business level strategy- Strategy in the Global Environment-Corporate Strategy- Vertical Integration-Diversification and Strategic Alliances- Building and Restructuring the corporation- Strategic analysis and choice – Managing Growth - Environmental Threat and Opportunity Profile (ETOP) - Organizational Capability Profile - Strategic Advantage Profile - Corporate Portfolio Analysis - SWOT Analysis - GAP Analysis - Mc Kinsey's 7s Framework - GE 9 Cell Model – Distinctive competitiveness - Selection of matrix - Balance Score Card- case study.

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UNIT IV STRATEGY IMPLEMENTATION & EVALUATION 9

The implementation process, Resource allocation, Designing organisational structure- Designing Strategic Control Systems- Matching structure and control to strategy- Implementing Strategic change-Politics-Power and Conflict-Techniques of strategic evaluation & control-case study.

UNIT V OTHER STRATEGIC ISSUES 9

Managing Technology and Innovation - Strategic issues for Non Profit organisations. New Business Models and strategies for Internet Economy-case study Challenges in Strategic Management: Introduction, Strategic Management as an Organisational Force, Dealing with Strategic Management in Various Situations, Strategic Management Implications and Challenges

Recent Trends in Strategic Management: Introduction, Strategic Thinking, Organisational Culture and its Significance, Organisational Development and Change, Change Management, Strategic management in a new globalised economy

TOTAL: 45 PERIODS

OUTCOMES:

- CO1: Ability to understand the Strategic management process and social responsibility of business organizations
- CO2: In-depth understanding about the need for developing competitive advantage for organizations
- CO 3: Provides insights into various corporate and business level strategies
- CO 4: Facilitates to identify the various control systems required for organizational strategy implementation process
- CO 5: Enhances the cognitive knowledge about various strategic issues and development of new business models

REFERENCES :

1. Hill. Strategic Management: An Integrated approach, 2009 Edition Wiley (2012).
2. John A.Parnell. Strategic Management, Theory and practice Biztantra (2012).
3. AzharKazmi, Strategic Management and Business Policy, 3rd Edition, Tata McGraw Hill, 2008
4. AdriaHABerberg and Alison Rieple, Strategic Management Theory & Application, Oxford University Press, 2008.
5. Lawrence G. Hrebiniak, Making strategy work, Pearson, 2 nd edition, 2013.
6. Gupta, Gollakota and Srinivasan, Business Policy and Strategic Management – Concepts and Application, Prentice Hall of India, 2005.
- 7 Dr.DharmaBir Singh, Strategic Management & Business Policy, KoGent Learning Solutions Inc., Wiley, 2012.
8. John Pearce, Richard Robinson and Amitha Mittal, Strategic Management, McGraw Hill, 12th Edition, 2012

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CO4	2	3	3	2	2	1	1	2	1	2	1	2
CO5	3	3	2	2	2	1	2	2	2	1	1	1

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OBJECTIVE:

- To understand the multinational dimensions in management of a MNC company and the business operations in more than one country.

UNIT I AN OVERVIEW OF INTERNATIONAL BUSINESS 9

Definition and drivers of International Business- Changing Environment of International Business- Country attractiveness- Trends in Globalization- Effect and Benefit of Globalization-International Institution: UNCTAD Basic Principles and Major Achievements, Role of IMF, Features of IBRD, Role and Advantage of WTO.

UNIT II THEORIES OF INTERNATIONAL TRADE AND INVESTMENT 9

Theories of International Trade: Mercantilism, Absolute Advantage Theory, Comparative Cost Theory, Hecksher-Ohlin Theory-Theories of Foreign Direct Investment : Product Life Cycle, Eclectic, Market Power, Internationalisation-Instruments of Trade Policy : Voluntary Export Restraints, Administrative Policy, Anti-dumping Policy, Balance of Payment.

UNIT III GLOBAL ENTRY 9

Strategic compulsions-- Strategic options – Global portfolio management- Global entry strategy, different forms of international business, advantages - Organizational issues of international business – Organizational structures – Controlling of international business, approaches to control – Performance of global business, performance evaluation system.

UNIT IV PRODUCTION, MARKETING, FINANCIALS OF GLOBAL BUSINESS 9

Global production: Location, scale of operations- cost of production- Standardization Vs Differentiation- Make or Buy decisions- global supply chain issues- Quality considerations. Globalization of markets: Marketing strategy- Challenges in product development- pricing- production and channel management. Foreign Exchange Determination Systems: Basic Concepts-types of Exchange Rate Regimes- Factors Affecting Exchange Rates.

UNIT V HUMAN RESOURCE MANAGEMENT IN INTERNATIONAL BUSINESS 9

Selection of expatriate managers- Managing across cultures -Training and development- Compensation- Disadvantages of international business – Conflict in international business- Sources and types of conflict – Conflict resolutions – Negotiation –Ethical issues in international business – Ethical decision-making.

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1 In Depth knowledge of driving factors of international Business
 CO2 Understanding of theories of trade and investment practiced in the global world
 CO3 Deep Insights in to various market entry strategies followed by Global Organizations
 CO4 Ability to identify the various global production and suppl chain issues and have an understanding of foreign exchange determination system
 CO5 Enhance the cognitive knowledge of managing business across the cultures

REFERENCES :

1. Charles W.I. Hill and Arun Kumar Jain, International Business, 6th edition, Tata McGraw Hill, New Delhi, 2010.
2. Michael R. Czinkota, Ilkka A. Ronkainen and Michael H. Moffet, International Business, 7th Edition, Cengage Learning, New Delhi, 2010.
3. K. Aswathappa, International Business, 5th Edition, Tata Mc Graw Hill, New Delhi, 2012.
4. John D. Daniels and Lee H. Radebaugh, International Business, Pearson Education Asia, New Delhi, 12th edition.
5. Vyuptakesh Sharan, International Business, 3rd Edition, Pearson Education in South Asia, New Delhi, 2011.
6. Rakesh Mohan Joshi, International Business, Oxford University Press, New Delhi, 2009.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	3	3	2	2	1	3	1	1	1	1
CO2	2	2	3	2	2	2	1	3	1	2	1	2
CO3	3	2	1	2	2	2	3	1	2	1	2	1
CO4	2	3	1	2	2	2	2	3	2	2	1	2
CO5	3	3	2	2	1	1	2	3	2	2	1	1

BA5361

CREATIVITY AND INNOVATION LABORATORY

L T P C
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OBJECTIVES:

- To understand the nuances involved in Creativity & Innovation.
- To get hands on experience in applying creativity in problem solving.

UNIT I INTRODUCTION 12

Need for Creative and innovative thinking for quality – Essential theory about directed creativity, Components of Creativity, Methodologies and approaches, individual and group creativity, Organizational role in creativity, types of innovation, barriers to innovation, innovation process, establishing criterion for assessment of creativity & innovation.

UNIT II MECHANISM OF THINKING AND VISUALIZATION 12

Definitions and theory of mechanisms of mind heuristics and models: attitudes, Approaches and Actions that support creative thinking - Advanced study of visual elements and principles- line, plane, shape, form, pattern, texture gradation, color symmetry. Spatial relationships and compositions in 2 and 3 dimensional space - procedure for genuine graphical computer animation – Animation aerodynamics – virtual environments in scientific Visualization – Unifying principle of data management for scientific visualization – Visualization benchmarking

UNIT III CREATIVITY 12

Nature of Creativity: Person, Process, Product and Environment, Methods and tools for Directed Creativity – Basic Principles – Tools that prepare the mind for creative thought – stimulation – Development and Actions: - Processes in creativity ICEDIP – Inspiration, Clarification, Distillation, Perspiration, Evaluation and Incubation – Creativity and Motivation The Bridge between man creativity and the rewards of innovativeness – Applying Directed Creativity.

UNIT IV CREATIVITY IN PROBLEM SOLVING 12

Generating and acquiring new ideas, product design, service design – case studies and hands-on exercises, stimulation tools and approaches, six thinking hats, lateral thinking – Individual activity, group activity, contextual influences. Assessing Your Personal Creativity and Ability to Innovate, Enhancing Your Creative and Innovative Abilities

UNIT V INNOVATION 12

Innovation- radical vs evolutionary,– Introduction to TRIZ methodology of Inventive Problem Solving – the essential factors – Innovator’s solution – creating and sustaining successful growth – Disruptive Innovation model – Segmentive Models – New market disruption – Managing the Strategy Development Process – The Role of Senior Executive in Leading New Growth – Passing the Baton, Entrepreneurial Tools for Creativity and Innovation

TOTAL: 60 PERIODS

OUTCOME:

- CO1: Provides insights about approaches to creativity and innovation
 CO2: Understanding of heuristic models and its applications
 CO3: Enhances the knowledge of nature of creativity
 CO4: Ability to apply creativity in problem solving
 CO5: Knowledge about radical and disruptive models of innovation

Note: Students will undergo the entire programme similar to a Seminar. It is activity based course.

Students will undergo the programme with both theoretical and practical content. Each student will be required to come out with innovative products or services. This will be evaluated by the faculty member(s) handling the course and the consolidated marks can be taken as the final mark. No end semester examination is required for this course

REFERENCES :

1. Rousing Creativity: Think New Now Floyd Hurt, ISBN 1560525479, Crisp Publications Inc.1999
2. Geoffrey Petty, " how to be better at Creativity", The Industrial Society 2012
3. Clayton M. Christensen Michael E. Raynor, " The Innovator's Solution", Harvard Business School Press Boston, USA, 2007
4. Semyon D. Savransky, " Engineering of Creativity – TRIZ", CRC Press New York USA, " 1st edition 2000
5. CSG Krishnamacharyalu, Lalitha R Innovation management, Himalaya Publishing House 2013

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	2	2	2	3	3	1	2	2
CO2	3	2	1	3	2	2	1	3	3	2	1	1
CO3	3	3	2	2	1	2	2	3	3	1	2	1
CO4	3	3	2	1	3	2	2	3	3	1	1	2
CO5	3	3	1	3	2	2	1	3	3	1	2	1

BA5071**ENTREPRENEURSHIP DEVELOPMENT****L T P C
3 0 0 3****OBJECTIVES:**

- To equip and develop the learners entrepreneurial skills and qualities essential to undertake business.
- To impart the learners entrepreneurial competencies needed for managing business efficiently and effectively.

UNIT I ENTREPRENEURIAL COMPETENCE**9**

Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneurial Personality - Characteristics of Successful Entrepreneurs – Knowledge and Skills of an Entrepreneur.

UNIT II ENTREPRENEURIAL ENVIRONMENT**9**

Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organisational Services - Central and State Government Industrial Policies and Regulations.

UNIT III BUSINESS PLAN PREPARATION**9**

Sources of Product for Business - Prefeasibility Study - Criteria for Selection of Product - Ownership - Capital Budgeting- Project Profile Preparation - Matching Entrepreneur with the Project - Feasibility Report Preparation and Evaluation Criteria.

UNIT IV LAUNCHING OF SMALL BUSINESS 9
 Finance and Human Resource Mobilisation - Operations Planning - Market and Channel Selection - Growth Strategies - Product Launching – Incubation, Venture capital, Start-ups.

UNIT V MANAGEMENT OF SMALL BUSINESS 9
 Monitoring and Evaluation of Business - Business Sickness - Prevention and Rehabilitation of Business Units - Effective Management of small Business - Case Studies.

TOTAL : 45 PERIODS

COURSE OUTCOMES:

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

- CO1. The learners will gain entrepreneurial competence to run the business efficiently.
- CO2. The learners are able to undertake businesses in the entrepreneurial environment
- CO3. The learners are capable of preparing business plans and undertake feasible projects.
- CO4. The learners are efficient in launching and develop their business ventures successfully
- CO5. The learners shall monitor the business effectively towards growth and development.

REFERENCES :

1. S.S.Khanka, Entrepreneurial Development, S.Chand and Company Limited, New Delhi, 2016.
2. R.D.Hisrich, Entrepreneurship, Tata McGraw Hill, New Delhi, 2018.
3. Rajeev Roy ,Entrepreneurship, Oxford University Press, 2nd Edition, 2011.
4. Donald F Kuratko,T.V Rao. Entrepreneurship: A South Asian perspective. Cengage Learning, 2012.
5. Dr. Vasant Desai, “Small Scale Industries and Entrepreneurship”, HPH, 2006.
6. Arya Kumar. Entrepreneurship, Pearson, 2012.
7. Prasanna Chandra, Projects – Planning, Analysis, Selection, Implementation and Reviews, Tata McGraw-Hill, 8 th edition, 2017.

Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	2	1	2	2	3	2	3	3	2	3	2	2
II	2	2	1	2	3	2	2	3	2	2	3	2
III	3	2	3	2	2	1	3	2	2	3	3	3
IV	2	3	2	1	3	3	2	2	3	2	2	2
V	3	2	2	3	2	3	2	2	1	2	2	3

BA5072

CORPORATE GOVERNANCE

L T P C
3 0 0 3

OBJECTIVES:

- This course will help to explore, recognize and understand the multiple paradoxes related to the study and application of corporate governance in organizations.
- The course will help to relate the corporate government practices of an organization to its performance, and to develop the technical skills required to evaluate the governance of a company from the perspective of an investor (individual or organizational capacity).

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UNIT I FUNDAMENTAL OF CORPORATE AND GOVERNANCE 9

Understanding Corporate Governance: Corporate governance – an overview, History of corporate governance-Concept of corporations -Concept of extended view of corporate citizenship, Owners and stakeholders, Types of owners, Rights and privileges of shareholders (Fernando, 4), Ownership structures and corporate governance- Pyramids and Tunneling:- Issues of corporate control and cash flow rights- Examples from restructure proposals of Vedanta group -Need for investor protection

UNIT II THEORIES AND PRACTICE OF CORPORATE GOVERNANCE 9

Concepts of Corporate Governance-Theory & practices of corporate governance, corporate governance mechanism and overview – land marks in emergence of corporate governance. Perspectives on Corporate Governance-Market and control model of governance chain-Global Corporate Governance Practices - Anglo-American Model - German Model - Japanese Model - Landmarks in Emergence of Corporate Governance- Board of Directors: Powerful Instrument of Governance - Types of Directors - Importance of Independent Directors

UNIT III ADMINISTRATIVE AND AUDIT MECHANISM 9

Board Committees and Chairman - Separation OF CEO & Board Chairman post - Nomination Committee - Board Selection - Boards Performance Evaluation- Executive Compensation - Role of Remuneration Committee - Human Side of Governance- Financial Oversight and Audit Mechanisms - Audit Committee - Disclosure mechanisms - Role of SEBI

UNIT IV GOVERNANCE METHODS AND RATING 9

Governance and Risk Management • Risk Management Committee - Corporate Misconduct & Misgovernance- Reasons for Corporate Misconduct - Whistle Blower's Protection - Factors Responsible for Obstructing Effective Corporate Governance Practices- Corporate Governance Rating • Standard & Poor's Corporate Governance Scores • Corporate Governance Rating Methodology (Crisil)

UNIT V GOVERNANCE ISSUES AND PRACTICES 9

Governance of Financial Organizations & PSU's- Organizational patterns of PSU's - Powers of PSU Boards - Governance issues in Entrepreneurial Firms - Unique issues among entrepreneurial forms- Choosing Board of Directors and Venture capitalists - Role of venture capitalists and buy-outs- Corporate Governance in Practice - Governance issues in MNC's & Joint Ventures

TOTAL : 45 PERIODS

OUTCOMES :

1. Demonstrate a solid understating of the purpose and nature of corporations
2. Evaluate different stakeholder's roles and significance in relations to corporate governance
3. Explain the importance of regulation, markets and information in corporate governance
4. Understand corporate governance methods and practices
5. Critically assess governance concerns for individual corporation and their stakeholders

REFERENCES :

1. Mandal, S.K (2012). Ethics in Business and Corporate Governance, 2/e; New Delhi: McGraw Hill Education
2. Cadbury, Adrian, Corporate Governance and Chairmanship: a personal view, Oxford University Press, 2003
3. Chandratre, K R and A N Navare, Corporate Governance – A Practical Handbook, Bharat Law House Pvt. Ltd., 2010 Edn
4. Saleem Sheikh & William Rees, Corporate Governance & Corporate Control, Cavendish Publishing Ltd., 1995
5. Fernando, A.C (2012). Corporate Governance: Principles, Policies and Practices, 2/e; New Delhi: Pearson
6. Jain, Arun K (2010). Corporate Governance: Strategy and Ethics, New Delhi: McGraw Hill Education

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2	2	1	2	1	3	1	1
CO2	3	2	3	2	2	2	1	1	2	3	3	2
CO3	3	2	3	2	2	2	1	1	2	3	3	2
CO4	3	2	1	2	2	2	1	2	1	3	1	1
CO5	3	2	3	2	2	2	1	1	2	3	3	2

TM5351

EVENT MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE :

- This course is designed to provide an introduction to the principles of event management. The course aims to impart knowledge on the various events and how these events can be organized successfully.

UNIT I EVENT CONTEXT 9

History & Evolution – Types of events – MICE – Types of Meeting, Trade Shows, Conventions, Exhibitions- Structure of event industry – Event Management as a profession – Perspectives on event : Government, Corporate & Community – Code of Ethics.

UNIT II EVENT PLANNING & LEGAL ISSUES 9

Conceptualizing the event – Host, sponsor, Media, Guest, Participants , Spectators – Crew – Design of concept – Theme and content development – Visualization – Event objectives – Initial planning – Budgeting – Event design and budget checklist – Preparation of functional sheets – Timing – Contracts and Agreements – Insurance, Regulation, Licence and Permits – Negotiation.

UNIT III EVENT MARKETING 9

Role of Strategic Marketing Planning - Pricing – Marketing Communication Methods & budget – Elements of marketing communication – Managing Marketing Communication – Role of Internet – Sponsorship – Event sponsorship – Strategy – Managing Sponsorships – Measuring & Evaluating sponsorship.

UNIT IV EVENT OPERATION 9

Site Selection – Types of location – Venue Requirements – Room, Stage, Audi-Visual, Lighting, Performers, Decors, Caterer, Photography & Videography – Protocols – Guest list – Guest demographics – Children at event – Invitation – Media – Freelance Event Operation – Road show - Food & Beverage – Entertainment – Event Logistics – Supply of facilities – Onsite logistics – Control of event logistics – Evaluation & Logistics.

UNIT V SAFETY & EVENT EVALUATION 9

Risk assessment – Safety officer, Medical Manager – Venue, Structural safety – Food safety – Occupational safety – Fire Prevention – Sanitary facilities – Vehicle traffic – Waste Management. Event Impact – Event Evaluation Process – Service Quality - Customer Satisfaction.

TOTAL: 45 PERIODS

OUTCOMES :

1. Learning about structure and code of ethics of events
2. Exploring and getting to know about event planning and regulations
3. Understand about event marketing, planning and strategies
4. Enhance professional skills in event management
5. Analyse the safety measure of event management

REFERENCES :

1. Lynn Van Der Wagen, Event Management for Tourism, Cultural Business & Sporting Events, 4 th Edition, Pearson Publications, 2014.
2. Lynn Van Der Wagen, & Brenda R. Carlos, Successful Event Management.
3. Judy Allen, Event Planning 2nd Edition, Wiley & Sons, Canada, 2014.

4. G.A.J. Bowdin, Events Management ,Elseiver Butterworth
5. John Beech, Sebastian Kaiser & Robert Kaspar, The Business of Events Management, Pearson Publication, 2014.
6. Judy, Event Planning Ethics and Etiquette: A Principled Approach to the Business of Special Event Management, 2014.
7. Shannon Kilkenny, The complete guide to successful event planning.
8. Julia Rutherford Silvers, Professional Event Coordination, The Wiley Event Management Series.
9. Allison , The Event Marketing Handbook: Beyond Logistics & Planning.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2	2	1	2	1	3	1	1
CO2	3	3	2	2	3	3	2	3	3	2	3	2
CO3	3	3	2	3	3	3	2	3	3	2	3	2
CO4	3	3	3	3	3	3	3	2	3	2	3	2
CO5	2	2	3	3	3	2	2	3	2	2	3	2

BA5073 MICRO AND SMALL BUSINESS MANAGEMENT L T P C
3 0 0 3

OBJECTIVES:

- To familiarize students with the theory and practice of small business management.
- To learn the legal issues faced by small business and how they impact operations.

UNIT I INTRODUCTION TO SMALL BUSINESS 9

Creation, Innovation, entrepreneurship and small business - Defining Small Business –Role of Owner – Manager – government policy towards small business sector –elements of entrepreneurship –evolution of entrepreneurship –Types of Entrepreneurship – social, civic, corporate - Business life cycle - barriers and triggers to new venture creation – process to assist start ups – small business and family business.

UNIT II SCREENING THE BUSINESS OPPORTUNITY AND FORMULATING THE BUSINESS PLAN 9

Concepts of opportunity recognition; Key factors leading to new venture failure; New venture screening process; Applying new venture screening process to the early stage small firm Role planning in small business – importance of strategy formulation – management skills for small business creation and development.

UNIT III BUILDING THE RIGHT TEAM AND MARKETING STRATEGY 9

Management and Leadership – employee assessments – Tuckman’s stages of group development - The entrepreneurial process model - Delegation and team building - Comparison of HR management in small and large firms - Importance of coaching and how to apply a coaching model.

Marketing within the small business - success strategies for small business marketing - customer delight and business generating systems, - market research, - assessing market performance- sales management and strategy - the marketing mix and marketing strategy.

UNIT IV FINANCING SMALL BUSINESS 9

Main sources of entrepreneurial capital; Nature of ‘bootstrap’ financing - Difference between cash and profit - Nature of bank financing and equity financing - Funding-equity gap for small firms. Importance of working capital cycle - Calculation of break-even point - Power of gross profit margin- Pricing for profit - Credit policy issues and relating these to cash flow management and profitability.

UNIT V VALUING SMALL BUSINESS AND CRISIS MANAGEMENT 9

Causes of small business failure - Danger signals of impending trouble - Characteristics of poorly performing firms - Turnaround strategies Concept of business valuation - Different valuation measurements - Nature of goodwill and how to measure it - Advantages and disadvantages of buying an established small firm - Process of preparing a business for sale.

TOTAL: 45 PERIODS**OUTCOMES:**

1. Familiarise the students with the concept of small business
2. In depth knowledge on small business opportunities and challenges
3. Ability to devise plans for small business by building the right skills and marketing strategies
4. Identify the funding source for small start ups
5. Business evaluation for buying and selling of small firms

REFERENCES :

1. Hankinson,A.(2000). "The key factors in the profile of small firm owner-managers that influence business performance. The South Coast Small Firms Survey, 1997-2000." Industrial and Commercial Training 32(3):94-98.
2. Parker,R.(2000). "Small is not necessarily beautiful: An evaluation of policy support for small and medium-sized enterprise in Australia." Australian Journal of Political Science 35(2):239-253.
3. Journal articles on SME's.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	-	1	-	1	2	1	2	-	1
CO2	3	3	3	3	3	3	3	2	3	3	2	3
CO3	3	3	2	2	3	3	2	3	3	2	3	2
CO4	3	2	2	-	2	1	2	-	2	1	1	-
CO5	3	2	2	3	2	1	3	2	3	3	2	3

BA5049 FUZZY LOGIC FOR MANAGEMENT DECISION MAKING L T P C
3 0 0 3

OBJECTIVE:

- To study the fundamentals of fuzzy logic to apply in management decision making.

UNIT I FUZZY SETS 9

Introduction - Definitions & Terminologies - Formulation and Parameterisation of Membership Functions - Fuzzy Union, Intersection and Complement.

UNIT II FUZZY RULES AND REASONING 9

Extension Principle and Fuzzy Relations - Linguistic Variables and Fuzzy If-Then rules - Compositional rule of inference and fuzzy reasoning.

UNIT III FUZZY APPLICATIONS IN MANAGEMENT DECISIONS 9

Fuzzy Models - Mamdani and Sugeno models. Applications in Management Decision making.

UNIT IV ADAPTIVE NEURO FUZZY INFERENCE SYSTEMS 9

ANFIS Architecture - Hybrid Learning Algorithm - ANFIS and RBFN cross fertilization - ANFIS as a Universal Approximator.

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UNIT V COACTIVE NEURO FUZZY MODELING**9**

Framework of Generalised ANFIS - multiple I/O Systems, Architectural comparisons. Neuron functions for Adaptive networks - Neuro-Fuzzy Spectrum - Analysis of Adaptive Learning Capability.

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1 Understand the basics and terminologies of fuzzy.
 CO2 Understand the principles and relations of fuzzy.
 CO3 The student will understand the applications of fuzzy.
 CO3 Learn about the architecture of adaptive neuro fuzzy inference system.
 CO4 The students will understand the neuro-fuzzy systems to management decision making situations.

REFERENCES :

1. Jang J.S.R., Sun C.T. and Mizutani E, Neuro-Fuzzy and Soft Computing - A computational Approach to Learning and Machine Intelligence, Pearson Education, 2007.
2. Sundareswaran K, A Learner's guide to Fuzzy Logic Systems, Jaico Publishing House, 2005.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	1	1	2	2	3	3	1	3	2
CO2	2	1	1	1	1	3	2	3	3	1	3	2
CO3	3	1	1	1	1	3	3	3	2	1	3	2
CO4	2	1	1	1	1	2	3	2	3	1	2	3
CO5	2	1	2	1	1	2	3	1	2	1	3	3

BA5050**INTELLECTUAL PROPERTY RIGHTS**

L T P C
3 0 0 3

OBJECTIVE :

- To understand intellectual property rights and its valuation.

UNIT I INTRODUCTION**9**

Intellectual property rights - Introduction, Basic concepts, Patents, Copyrights, Trademarks, Trade Secrets, Geographic Indicators; Nature of Intellectual Property, Technological Research, Inventions and Innovations, History - the way from WTO to WIPO, TRIPS.

UNIT II PROCESS**9**

New Developments in IPR, Procedure for grant of Patents, TM, GIs, Patenting under Patent Cooperation Treaty, Administration of Patent system in India, Patenting in foreign countries.

UNIT III STATUTES**9**

International Treaties and conventions on IPRs, The TRIPs Agreement, PCT Agreement, The Patent Act of India, Patent Amendment Act (2005), Design Act, Trademark Act, Geographical Indication Act, Bayh- Dole Act and Issues of Academic Entrepreneurship.

UNIT IV STRATEGIES IN INTELLECTUAL PROPERTY**9**

Strategies for investing in R&D, Patent Information and databases, IPR strength in India, Traditional Knowledge, Case studies.

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UNIT V MODELS**9**

The technologies Know-how, concept of ownership, Significance of IP in Value Creation, IP Valuation and IP Valuation Models, Application of Real Option Model in Strategic Decision Making, Transfer and Licensing.

TOTAL: 45 PERIODS**OUTCOME:**

- Understanding of intellectual property and appreciation of the need to protect it
- Awareness about the process of patenting
- Understanding of the statutes related to IPR
- Ability to apply strategies to protect intellectual property
- Ability to apply models for making strategic decisions related to IPR

REFERENCES :

1. V. Sople Vinod, Managing Intellectual Property by (Prentice hall of India Pvt.Ltd), 2006.
2. Intellectual Property rights and copyrights ,EssEss Publications.
3. A. Primer, R. Anita Rao and Bhanoji Rao, Intellectual Property Rights, Lastain Book company.
4. Edited by Derek Bosworth and Elizabeth Webster, The Management of Intellectual Property, Edward Elgar Publishing Ltd., 2006.
5. WIPO Intellectual Property Hand book.

IPR	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	3	3	3	3	1	2	1
CO2	3	3	2	3	3	3	3	3	3	1	1	1
CO3	3	3	3	3	3	3	3	3	3	2	2	1
CO4	3	3	3	3	3	3	2	2	3	3	1	1
CO5	3	3	3	3	3	3	2	2	3	3	2	1

BA5051**SUSTAINABLE MANAGEMENT****L T P C
3 0 0 3****OBJECTIVES:**

- To provide students with fundamental knowledge of the notion of corporate sustainability.
- To determine how organizations impacts on the environment and socio-technical systems, the relationship between social and environmental performance and competitiveness, the approaches and methods.

UNIT I MANAGEMENT OF SUSTAINABILITY**9**

Management of sustainability -rationale and political trends: An introduction to sustainability management, International and European policies on sustainable development, theoretical pillars in sustainability management studies.

UNIT II CORPORATE SUSTAINABILITY AND RESPONSIBILITY**9**

Corporate sustainability perimeter, corporate sustainability institutional framework, integration of sustainability into strategic planning and regular business practices, fundamentals of stakeholder engagement.

UNIT III SUSTAINABILITY MANAGEMENT: STRATEGIES AND APPROACHES 10

Corporate sustainability management and competitiveness: Sustainability-oriented corporate strategies, markets and competitiveness, Green Management between theory and practice, Sustainable Consumption and Green Marketing strategies, Environmental regulation and strategic postures; Green Management approaches and tools; Green engineering: clean technologies and innovation processes; Sustainable Supply Chain Management and Procurement.

UNIT IV SUSTAINABILITY AND INNOVATION 8
Socio-technical transitions and sustainability, Sustainable entrepreneurship, Sustainable pioneers in green market niches, Smart communities and smart specializations.

UNIT V SUSTAINABLE MANAGEMENT OF RESOURCES, COMMODITIES AND COMMONS 9
Energy management, Water management, Waste management.

OUTCOMES :

- CO1: An understanding of sustainability management as an approach to aid in evaluating and minimizing environmental impacts while achieving the expected social impact.
- CO2: An understanding of corporate sustainability and responsible Business Practices
- CO3: Knowledge and skills to understand, to measure and interpret sustainability performances.
- CO4: Knowledge of innovative practices in sustainable business and community management
- CO5: Deep understanding of sustainable management of resources and commodities

REFERENCES :

1. Daddi, T., Iraldo, F., Testa, Environmental Certification for Organizations and Products: Management, 2015
2. Christian N. Madu, Handbook of Sustainability Management 2012
3. Petra Molthan-Hill, The Business Student's Guide to Sustainable Management: Principles and Practice, 2014
4. Margaret Robertson, Sustainability Principles and Practice, 2014
5. Peter Rogers, An Introduction to Sustainable Development, 2006

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	2	2	1	2	2	1	2	2
CO2	3	2	2	3	3	2	2	3	2	2	1	1
CO3	3	3	1	3	2	3	2	3	2	1	2	1
CO4	3	3	2	3	3	2	1	3	2	1	1	2
CO5	3	3	2	3	2	2	1	3	2	1	2	1

BA5001 SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT L T P C
3 0 0 3

OBJECTIVES :

- Enables student to
- Understand the nuances of stock market operations.
 - Understand the techniques involved in deciding upon purchase or sale of securities.

UNIT I INVESTMENT SETTING 9
Financial and economic meaning of Investment – Characteristics and objectives of Investment –Investment process -Types of Investment – Investment alternatives – Choice and Evaluation – Risk and return concepts - Valuation of bonds and stock.

UNIT II FUNDAMENTAL ANALYSIS 9
Economic Analysis – Economic forecasting and stock Investment Decisions – Forecasting techniques. Industry Analysis : Industry classification, Industry life cycle – Company Analysis Measuring Earnings – Forecasting Earnings – Applied Valuation Techniques – Graham and Dodds investor ratios.

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UNIT III TECHNICAL ANALYSIS 9

Fundamental Analysis Vs Technical Analysis -- Dow theory – Charting methods - Chart Patterns Trend – Trend reversals – Market Indicators -Moving Average – Exponential moving Average Oscillators -RSI -ROC - MACD.
Efficient Market theory - Forms of market efficiency -weak, semi-strong, strong form - Empirical tests of market efficiency -its application.

UNIT IV PORTFOLIO CONSTRUCTION AND SELECTION 9

Portfolio analysis - Reduction of portfolio risk through diversification – Portfolio risk - Portfolio Selection - Feasible set of portfolios - Efficient set - Markowitz model - Single index model - Construction of optimum portfolio - Multi-index model.

UNIT V 9

Capital Asset Pricing model - Lending and borrowing - CML - SML - Pricing with CAPM - Arbitrage pricing theory– Portfolio Evaluation - Sharpe's index Treynor's index, Jensen's index – Mutual Funds – Portfolio Revision.

TOTAL :45 PERIODS

OUTCOMES:

- 1.Understand the concept of investment and identify the investment alternatives to investors
2. Learn the nuances of fundamental analyses and technical analyses
3. Analyse and evaluate the value of securities
4. Explain how to construct an efficient portfolio
5. Explore the various methods through which portfolio evaluation could be done

REFERENCES :

1. Donald E.Fischer & Ronald J.Jordan, Security Analysis & Portfolio Management, PHI Learning., New Delhi, 8th edition, 2011.
2. Prasannachandra, Investment analysis and Portfolio Management, Tata McGraw Hill, 2011.
3. Reilly & Brown, Investment Analysis and Portfolio Management, Cengage Learning, 9th edition, 2011.
4. S. Kevin , Securities Analysis and Portfolio Management , PHI Learning , 2012.
5. Punithavathy Pandian, Analysis & Portfolio Management, Vikas publishing house PVT LTD, second edition, 2013.
6. Bodi, Kane, Markus, Mohanty, Investments, 8th edition, Tata McGraw Hill, 2011.
7. V.A.Avadhan, Securities Analysis and Portfolio Management, Himalaya Publishing House, 2013.
8. V.K.Bhalla, Investment Management, S.Chand& Company Ltd., 2012

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	3	2	1	2	1	3	1	1
CO2	3	1	2	2	3	2	1	1	1	3	-	1
CO3	2	-	1	3	3	1	2	2	-	3	-	1
CO4	3	2	-	3	3	1	-	1	1	3	-	1
CO5	3	2	-	3	2	1	-	1	1	3	-	1

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OBJECTIVE:

- To understand the types and functions of the various financial markets in India, its instruments and Regulations.

UNIT I FINANCIAL MARKETS IN INDIA 9

Indian financial system and markets – structure of financial markets in India –Types-Participants in financial Market – Regulatory Environment, - RBI, CCIL, Common securities market, Money market, - Capital market - Governments philosophy and financial market – financial instruments

UNIT II INDIAN CAPITAL MARKET- PRIMARY MARKET 9

Primary Market - Primary market system - Types of scripts - Issue of capital: process, regulation pricing of issue, – Methods of floating new issues, Book building- Primary markets intermediaries: commercial banks, development banks, Merchant banker, issue managers, rating agencies etc – Role of primary market – Regulation of primary market.

UNIT III SECONDARY MARKET 9

Stock exchanges in India History and development -listing - Depositories - Stock exchange mechanism : Trading, Settlement, risk management, Basics of pricing mechanism - Player and stock exchange - Regulations of stock exchanges –Role of SEBI – BSE, OTCEI , NSE, ISE, - Role of FIIs, MFs and investment bankers –Stock market indices – calculation.

UNIT IV DEBT MARKET AND FOREX MARKET 9

Bond markets in India: Government bond market and its interface with capital market - Components of bond market - G-Sec, T-Bills, Corporate Bonds, Yield conventions, Role of primary dealers, Auction Markets - Pricing of Bonds
Introduction to Forex markets, basics in exchange rates theory - Forex risk exposures and basics of corporate forex risk management.

UNIT V MUTUAL FUNDS, DERIVATIVES MARKETS AND VENTURE CAPITAL AND PRIVATE EQUITY 9

Mutual funds institutions in India. Types of mutual funds, Basics in portfolio management, Metrics of performance for fund manager
Introduction to Derivatives and the size of derivatives markets -Brief introduction to forwards, Options, Futures and Swaps. Role of VCs and PEs in financial markets - Venture capital and Private equity

TOTAL: 45 PERIODS**OUTCOMES:**

1. Understanding the basic concepts of the finance markets in India
2. Identify the underlying structure and functions of Indian financial markets
3. Familiarise the methods of issuing shares and the role of intermediaries in the primary market
4. Learn about the trading mechanism in stock market
5. Describe the instruments, participants and trading in debt market

REFERENCES :

1. Christopher Viney and Peter Phillips, Financial Institutions, Instruments and Markets (2015), 8th Edition published by McGraw Hill.
2. Pathak, Bharati V., Indian Financial System: Markets, Institutions and Services, Pearson education (Singapore), New Delhi, Fourth edition, 2014.
3. Saunders, Anthonu and Cornett, Marcia Millon, Financial markets and Institutions: An Introduction to the risk management approach, McGrawHill, Irwin, New York,3rd Edition,2017.
4. Bhole, L.M, Financial institutions and Markets: Structure, Growth and Innovations, McGrawHill, New Delhi, Sixth edition, 2017.
5. Fabozzi, Frank J. and Modigliani, Franco, Capital Markets: Institutions and Markets, Prentice Hall of India, New Delhi, Fourth edition, 2009.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	1	1	-	1	2	2	3	1	2
CO2	2	1	1	2	1	-	1	2	2	3	1	2
CO3	3	-	2	2	2	-	1	3	2	3	-	3
CO4	3	1	2	2	3	1	2	3	2	3	1	3
CO5	3	1	2	2	2	1	2	2	2	3	1	3

BA5003

BANKING AND FINANCIAL SERVICES

L T P C
3 0 0 3

OBJECTIVES :

- Grasp how banks raise their sources and how they deploy it and manage the associated risks
- Understand e-banking and the threats that go with it.
- Understand about other asset based and fund based financial services in India

UNIT I INTRODUCTION TO INDIAN BANKING SYSTEM AND PERFORMANCE

VALUATION

9

Overview of Indian Banking system – Structure – Functions – Key Regulations in Indian Banking sector –RBI Act, 1934/ 2006 –Banking Regulation Act, 1949– Negotiable Instruments Act 1881/ 2002 – Provisions Relating to CRR – Provision for NPA's - Overview of Financial Statements of banks – Balance Sheet – Income Statement - CAMEL

UNIT II MANAGING BANK FUNDS/ PRODUCTS & RISK MANAGEMENT

9

Capital Adequacy – Deposit and Non-deposit sources – Designing deposit schemes and pricing of deposit sources – loan management – Investment Management – Asset and Liability Management – Financial Distress –Signal to borrowers – Prediction Models – Risk Management – Interest rate – Forex – Credit market –operational and solvency risks – NPA's – Current issues on NPA's – M&A's of banks into securities market

UNIT III DEVELOPMENT IN BANKING TECHNOLOGY

9

Payment system in India – paper based – e payment –electronic banking –plastic money – e-money – forecasting of cash demand at ATM's –The Information Technology Act, 2000 in India – RBI's Financial Sector Technology vision document – security threats in e-banking & RBI's Initiative.

UNIT IV ASSET BASED FINANCIAL SERVICES

9

Introduction – Need for Financial Services – Financial Services Market in India – NBFC – RBI framework and act for NBFC – Leasing and Hire Purchase – Financial evaluation – underwriting – mutual funds

UNIT V INSURANCE AND OTHER FEE BASED FINANCIAL SERVICES

9

Insurance Act, 1938 –IRDA – Regulations – Products and services –Venture Capital Financing –Bill discounting –factoring – Merchant Banking – Role of SEBI

TOTAL :45 PERIODS

OUTCOMES :

1. Understand the overall structure and functions of Indian Financial System
2. Gain knowledge about regulations governing the Indian Banking system
3. Price various types of loans proposed by banks to various prospective borrowers with different risk profiles and evaluate the performance of banks
4. Familiarise the students with the concept of e-banking
5. In-depth understanding of fee-based and fund-based financial services in India

REFERENCES :

1. Padmalatha Suresh and Justin Paul, "Management of Banking and Financial Services, Pearson, Delhi, 2017.
2. Meera Sharma, "Management of Financial Institutions – with emphasis on Bank and Risk Management", PHI Learning Pvt. Ltd., New Delhi 2010
3. Peter S. Rose and Sylvia C. and Hudgins, "Bank Management and Financial Services", Tata McGraw Hill, New Delhi, 2017

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	1	1	-	1	2	2	3	1	2
CO2	2	2	2	2	3	-	-	1	1	3	-	1
CO3	3	2	2	2	2	3	1	3	1	3	1	1
CO4	3	2	2	2	2	2	1	3	2	3	3	3
CO5	3	1	2	2	2	2	-	2	-	2	-	1

BA5004

FINANCIAL DERIVATIVES

L T P C
3 0 0 3

OBJECTIVES :

To enable students

- Understand the nuances involved in derivatives
- Understand the basic operational mechanisms in derivatives

UNIT I INTRODUCTION 10

Derivatives – Definition – Types – Forward Contracts – Futures Contracts – Options – Swaps – Differences between Cash and Future Markets – Types of Traders – OTC and Exchange Traded Securities – Types of Settlement – Uses and Advantages of Derivatives – Risks in Derivatives.

UNIT II FUTURES CONTRACT 10

Specifications of Futures Contract - Margin Requirements – Marking to Market – Hedging using Futures – Types of Futures Contracts – Securities, Stock Index Futures, Currencies and Commodities – Delivery Options – Relationship between Future Prices, Forward Prices and Spot Prices.

UNIT III OPTIONS 10

Definition – Exchange Traded Options, OTC Options – Specifications of Options – Call and Put Options – American and European Options – Intrinsic Value and Time Value of Options – Option payoff, options on Securities, Stock Indices, Currencies and Futures – Options pricing models – Differences between future and Option contracts.

UNIT IV SWAPS 7

Definition of SWAP – Interest Rate SWAP – Currency SWAP – Role of Financial Intermediary– Warehousing – Valuation of Interest rate SWAPs and Currency SWAPs Bonds and FRNs –Credit Risk.

UNIT V DERIVATIVES IN INDIA 8

Evolution of Derivatives Market in India – Regulations - framework – Exchange Trading in Derivatives – Commodity Futures – Contract Terminology and Specifications for Stock Options and Index Options in NSE – Contract Terminology and specifications for stock futures and Index futures in NSE – Contract Terminology and Specifications for Interest Rate Derivatives.

TOTAL: 45 PERIODS

OUTCOMES :

1. Possess good skills in hedging risks using derivatives
2. Understand about future contract and options
3. Learning in depth about options and swaps
4. Knowing about the evolution of derivative markets
5. Develop in depth knowledge about stock options and index futures in NSE

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REFERENCES:

1. John.C.Hull, Options, Futures and other Derivative Securities", PHI Learning, 9th Edition, 2012
2. Keith Redhead, „Financial Derivatives – An Introduction to Futures, Forwards, Options and SWAPs“,– PHI Learning, 2011.
3. Stulz, Risk Management and Derivatives, Cengage Learning, 2nd Edition, 2011.
4. Varma, Derivatives and Risk Management, 2nd^t Edition, 2011.
5. David Dubofsky – „Option and Financial Futures – Valuation and Uses, McGraw Hill International Edition.
6. S.L.Gupta, Financial Derivatives- Theory, Concepts and Practice, Prentice Hall Of India, 2011. Website of NSE, BSE.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	3	2	3	2	3	2	3	1	3
CO2	3	2	3	3	2	3	2	3	2	3	1	3
CO3	3	2	3	3	2	3	2	3	2	3	1	3
CO4	1	1	1	1	2	-	-	3	-	2	-	-
CO5	3	2	2	2	2	2	1	3	1	3	1	3

BA5005**FINANCIAL MODELLING****L T P C****3 0 0 3****OBJECTIVE :**

Making students to build financial models by including various fields of study viz Financial Management and Derivatives.

UNIT I INTRODUCTION TO FINANCIAL MODELLING & BUILT IN FUNCTIONS USING SPREAD SHEETS 9

Introduction to Financial Modelling- Need for Financial Modelling- Steps for effective financial modelling-Introduction to Time value of money & Lookup array functions :FV,PV,PMT,RATE,NPER, Vlookup, Hlookup ,if, countifetc - Time value of Money Models: EMI with Single & Two Interest rates –Loan amortisation modelling-Debenture redemption modelling

UNIT II BOND & EQUITY SHARE VALUATION MODELLING 9

Bond valuation – Yield to Maturity(YTM): Rate method Vs IRR method-Flexi Bond and Strip Bond YTM Modelling-Bond redemption modelling -Equity share valuation : Multiple growth rate valuation modelling with and without growth rates

UNIT III CORPORATE FINANCIAL MODELLING 9

Alt Man Z score Bankruptcy Modelling-Indifference point modelling – Financial Break even modelling -Corporate valuation modelling(Two stage growth)- Business Modelling for capital budgeting evaluation: Payback period ,NPV ,IRR and MIRR

UNIT IV PORTFOLIO MODELLING 9

Risk ,Beta and Annualised Return –Security Market Line Modelling –Portfolio risk calculation (Equal Proportions)-Portfolio risk optimisation (varying proportions)-Portfolio construction modelling

UNIT V DERIVATIVE MODELLING 9

Option pay off modelling: Long and Short Call & Put options -Option pricing modeling (B-S Model)-Optimal Hedge Contract modelling

TOTAL: 45 PERIODS

OUTCOMES:

1. Develop fast, efficient and accurate excel skills
2. Design and construct useful and robust financial modelling applications
3. Recognize efficient financial budgeting and forecasting techniques
4. Familiarise the students with the valuation modelling of securities
5. The course establishes the platform for students to develop various portfolio models

REFERENCES:

1. Wayne L Winston, "Microsoft Excel 2016-Data Analysis and Business Modelling", PHI publications, (Microsoft Press), New Delhi, 2017.
2. Chandan Sen Gupta, "Financial analysis and Modelling –Using Excel and VBA", Wiley Publishing House, 2014'
3. Craig W Holden, "Excel Modelling in Investments" Pearson Prentice Hall, Pearson Inc, New Jersey, 5th Edition 2015
4. Ruzhbeh J Bodanwala, "Financial management using excel spread sheet", Taxman Allied services Pvt Ltd, New Delhi, 3rd Edition 2015.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	-	3	2	-	1	3	1	2	-	1
CO2	3	3	2	3	2	3	2	3	2	3	-	3
CO3	3	3	2	3	2	3	2	3	2	3	-	3
CO4	3	2	2	3	3	3	2	3	2	3	1	3
CO5	3	3	2	3	2	3	2	3	2	3	-	3

BA5006**BUSINESS ANALYSIS AND VALUATION****L T P C**
3 0 0 3**OBJECTIVE:**

- To understand the financial analysis and valuation techniques of a firm
- To acquire the analytical skills to assess and value a firm

UNIT I BUSINESS ANALYSIS – AN INTRODUCTION 9

Financial modelling for project appraisal – concept & application – forecasting techniques – financial analysis.

UNIT II FINANCIAL ANALYSIS 9

Analysis of statement of shareholders equity – analysis of balance sheet and income statement – distress analysis – analysis of cash flow statement – analysis of profitability – analysis of growth and sustainability.

UNIT III BUSINESS VALUATION 9

Basis of valuation – principles and techniques of valuation – role of valuation – valuation models - DCF model – FCF model – relative valuation – contingent claim valuation.

UNIT IV VALUATION OF MERGERS AND ACQUISITIONS 9

Business strategy – basis of M&A – theories of M&A – synergy in M&A – Approaches to valuation in case of M&A – selection of appropriate cost of capital for M&A for valuation – implications of regulations – Takeover – Post – Merger integration process – shareholder value analysis.

UNIT V VALUATION OF ASSETS AND LIABILITIES 9

Forms of intellectual property and methods of valuation – valuation of fixed assets – valuation of inventories – valuation of investments – valuation of shares – valuation of goodwill, patents, copyrights – valuation of brands – valuation of liabilities – MM Hypothesis

TOTAL : 45 PERIODS

OUTCOMES:

1. Perform a strategy analysis and use it to make proforma statements
2. Familiarise the student with different valuation methods and tools for assessing their accuracy
3. Value creation in a merger and acquisition context
4. Choose a proper valuation method given the characteristic of a firm and estimate the value of the firm given the chosen method
5. Analyse the accounting quality of financial statements and valuation of assets and liabilities

REFERENCES :

1. Krishna G. Palepu and Paul M. Healy: Business Analysis & Valuation Using Financial Statements, Text Only (PHB) 5th Edition, Cengage Learning 2013. Paperback Print: ISBN-10 1111972303, ISBN-13 978-1111972301
2. Joshua Rosenbaum and Joshua Pearl: Investment Banking: Valuation, Leveraged Buyouts, and Mergers and Acquisitions, John Wiley & Sons; 2nd edition (2013), ISBN: 1118656210

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	3	2	1	3	2	3	3	2	3
CO2	3	2	2	2	3	3	2	3	2	3	1	3
CO3	3	3	3	3	3	3	3	2	3	3	2	3
CO4	3	2	2	2	3	3	2	3	2	3	1	3
CO5	3	2	2	3	2	1	3	2	3	3	2	3

BA5007

INTERNATIONAL FINANCE

L T P C
3 0 0 3

OBJECTIVE :

- To understand the International Financial Environment, Management and Risks involved.

UNIT I INTERNATIONAL TRANSACTIONS 9

Overview and Evolution of International Finance –Institutions for International Finance – Internationalization process –International Monetary and Financial System – Balance of Payments – Exchange rate and money supply – International parity relations – Purchasing power parity – interest rate parity – Forward rate parity.

UNIT II MULTINATIONAL FINANCIAL MANAGEMENT 9

Process of overseas expansion – Reasons for cross-border investing – The theory of investment – techniques of project evaluation - Approaches for investment under uncertainty - FDI – Measuring and Managing Risk – International M&A – Financial Techniques in M&A – Regulations of M&A in major countries.

UNIT III INTERNATIONAL MONETARY SYSTEM 9

Introduction to Institutions of the Foreign Exchange Interbank Market - Foreign Exchange Spot Transactions – forward market — Hedging and Speculation - Hedging FX Transaction Exposure - The Eurocurrency market – international banking – structure and instruments

UNIT IV BORROWING AND LENDING : INTERNATIONAL SOURCES OF FINANCE 9

Bond Markets of various countries – Fixed and floating rate notes - Syndicate loans – Syndicated Eurocredits – ADR – GDR – Managing interest rate risk – Bond prices and yields – Bond Management – tools and techniques

UNIT V INTERNATIONAL RISK ASSESSMENT AND OTHER INTERNATIONAL MARKETS 9

Country and political risk analysis – benefits and risks of international portfolio investment – assessing country creditworthiness – futures markets and instruments – option markets and instruments – option pricing – option pricing theory in financial risk assessment

TOTAL :45 PERIODS

OUTCOMES :

1. Learn about evolution, process and system of International Finance
2. Identify the concepts of international merger and acquisitions, financial techniques and regulations
3. Understand about international monetary system
4. Knowing about ADR, GDR and bond management
5. Explore the learning in international risk assessment

REFERENCES :

1. Apte P.G., International Financial Management, Tata McGraw Hill, 2011.
2. Jeff Madura, International Corporate Finance, Cengage Learning, 9th Edition, 2011.
3. Alan C. Shapiro, Multinational Financial Management, PHI Learning, 5th Edition, 2010.
4. Eunand Resnik, International Financial Management, Tata McGraw Hill, 5th Edition, 2011.
5. Website of Indian Government on EXIM policy

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	-	2	-	1	2	1	2	-	1
CO2	3	3	3	3	3	3	3	2	3	3	2	3
CO3	3	3	3	3	3	3	3	2	3	3	2	3
CO4	2	2	1	-	2	-	1	2	1	2	-	1
CO5	3	3	3	3	3	3	3	2	3	3	2	3

BA5008**BEHAVIOURAL FINANCE**

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3	0	0	3

OBJECTIVE :

- To identify and understand systematic behavioral factors that influences the investment behavior.

UNIT I INTRODUCTION: WHY BEHAVIORAL FINANCE**9**

The role of security prices in the economy – EMH – Failing EMH – EMH in supply and demand framework – Equilibrium expected return models – Investment decision under uncertainty – Introduction to neoclassical economics and expected utility theory – Return predictability in stock market - Limitations to arbitrage

UNIT II DECISION AND BEHAVIORAL THEORIES**9**

Nash Equilibrium: Keynesian Beauty Context and The Prisoner's Dilemma - The Monthly Hall Paradox - The St. Petersburg Paradox - The Allais Paradox - The Ellsberg Paradox - Prospects theory – CAPM - behavioral portfolio theory – SP/A theory – brief history on rational thought – pasacl – Fermat to Friedman - savage

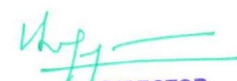
UNIT III DECISION MAKING BIASES**9**

Information screening bias - Heuristics and behavioral biases of investors – Bayesian decision making – cognitive biases – forecasting biases – emotion and neuroscience – group behaviour – investing styles and behavioral finance

UNIT IV ARBITRAGEURS**9**

Definition of arbitrageur - Long-short trades - Risk vs. Horizon - Transaction costs and short-selling costs - Fundamental risk - Noise-trader risk - Professional arbitrage - Destabilizing informed trading

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UNIT V MANAGERIAL DECISIONS**9**

Supply of securities and firm investment characteristics (market timing, catering) by rational firms -
 Associated institutions - Relative horizons and incentives - Biased managers

TOTAL :45 PERIODS**OUTCOME :**

1. Understanding the need of behavioural finance
2. Knowing about various decision and behavioural theories
3. Learn about heuristic and behavioural biases of investors
4. Analyse and understand about arbitragers and managerial decision
5. Thorough understanding about the price discovery in markets

REFERENCES :

1. Shleifer, Andrei (2000). Inefficient Markets: An Introduction to Behavioral Finance. Oxford, UK: Oxford University Press.
2. Daniel Kahneman, Paul Slovic, and Amos Tversky (eds.). (1982) Judgment under Uncertainty: Heuristics and biases, Oxford; New York: Oxford University Press.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	1	2	3	3	1	2	2	3	2	2
CO2	3	1	1	2	3	3	1	2	2	3	2	2
CO3	3	2	2	2	3	3	1	2	2	3	2	2
CO4	3	3	3	2	3	3	2	3	3	3	2	3
CO5	3	2	2	2	3	3	2	3	2	3	1	3

BA5009 FINTECH AND BLOCKCHAIN APPLICATIONS IN FINANCE L T P C
3 0 0 3

OBJECTIVES:

- To provide a broad introduction to the field of FinTech and Blockchain and its application in the field of Financial sector.
- To get a thorough knowledge on topics related block chain and crypto currencies, decentralized applications, innovative wealth management markets for smart contracts, applications of blockchain technologies in various finance areas, alternative and P2P lending and crowd funding,

UNIT I**9**

FinTech, Future prospects and potential issues with FinTech- Global FinTech investments-Digital banking-Impact of digital technology on banking sector- Changes in customer buying behaviour-New age payments and remittances-Social media based remittances-Digital mortgages-Global Financial Instruments, Asset Management and Capital Markets

UNIT II**9**

New Generation Commerce-Point of sale evolution (POS)- m-POS business model-m-Wallets-Smart credit cards-T-commerce- Crowd funding and Crowd investing-P2P lending-Robo advising-FinTech and Global economy-New operating models for banks-Banking as service and Open APIs-Neo banks-Challenger banks

UNIT III**9**

Big data in the Financial services Industry-Internet of Things (IOT) - IOT in Financial services-Innovative wealth management-Personal Finance Management-InsurTech-P2P insurance Block chained insurance-Risk associated with crypto market-Cost associated with crypto market investment-Crypto currency wallets

UNIT IV**9**

Blockchain-Components of Blockchain -Public and private keys-Crypto currencies-Distributed ledgers- Impact of Blockchain in Financial Services—Applications of Blockchain in Financial Services-Clearing and Settlement- Trade Finance-Compliances-Know Your Customer-Anti Money Laundering.

UNIT V**9**

Distributed ledger for identification-Identification for Unbanked-Unique identification system in India-Using biometrics as Identification Cybercrime-Cyber security categories and players-RegTech

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1: Ability to apply the concepts of FinTech and critically evaluate its role in financial services.
- CO2: Ability to apply the concept of new generation commerce and new operating models for banks.
- CO3: Knowledge to use the concepts of FinTech in wealth management, personal finance management, crowd funding and crowd investing.
- CO4: Apply the concept of cryptocurrencies, risk associated with crypto market and cost involved.
- CO5: Critically evaluate the role of FinTech in financial services and understand recent developments such as Distributed ledger for identification, Identification for Unbanked-Unique identification system in India, Cybercrime, Cyber security categories

TEXT BOOKS

1. Blockchain Application in Finance, Peter Borovykh, Blockchain Driven, 2nd Edition, 2018
2. FinTech in a Flash, Financial Technology Made Easy, Agustin Rubini, Banking Innovations 2nd edition 2017
3. Inclusive FinTech: Blockchain, Cryptocurrency and ICO, David Lee Chuen and Linda Low, World Scientific Publishing, 2018

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	2	1	3	2	1	2	2
CO2	3	3	2	3	2	3	2	3	2	2	1	1
CO3	3	3	2	2	2	3	2	3	2	1	2	1
CO4	3	3	2	3	2	1	2	3	2	2	1	2
CO5	3	3	2	3	2	2	1	3	2	1	2	1

BA5010**SUPPLY CHAIN MANAGEMENT**
L T P C
3 0 0 3
OBJECTIVE:

- To help understand the importance of and major decisions in supply chain management for gaining competitive advantage.

UNIT I INTRODUCTION**9**

Supply Chain – Fundamentals, Evolution, Role in Economy, Importance, Decision Phases, Enablers & Drivers of Supply Chain Performance; Supply chain strategy; Supply Chain Performance Measures.

UNIT II SUPPLY CHAIN NETWORK 9

Distribution Network Design – Role in supply chain, Influencing factors, design options, online sales and distribution network, Distribution Strategies; Network Design in supply chain – Role, influencing factors, framework for network design, Impact of uncertainty on Network Design.

UNIT III PLANNING DEMAND, INVENTORY AND SUPPLY 9

Managing supply chain cycle inventory and safety inventory - Uncertainty in the supply chain , Analyzing impact of supplychain redesign on the inventory, Risk Pooling, Managing inventory for short life-cycle products, multiple item -multiple location inventory management; Pricing and Revenue Management.

UNIT IV LOGISTICS 9

Transportation – Role, Modes and their characteristics, infrastructure and policies, transport documentation, design options, trade-offs in transportation design, intermodal transportation. Logistics outsourcing – catalysts, benefits, value proposition. 3PL, 4PL, 5PL, 6PL; International Logistics -objectives, importance in global economy, Characteristics of global supply chains, Incoterms.

UNIT V SUPPLY CHAIN INNOVATIONS 9

Supply Chain Integration, SC process restructuring, IT in Supply Chain; Agile Supply Chains, Legible supply chain, Green Supply Chain, Reverse Supply chain; Supply chain technology trends – AI, Advanced analytics, Internet of Things, Intelligent things, conversational systems, robotic process automation, immersive technologies, Blockchain.

TOTAL: 45 PERIODS

OUTCOME:

- Understanding of supply chain fundamentals
- Ability to design supply chain networks to enhance supply chain performance
- Ability to plan demand based on inventory and supply
- Understanding the role of logistics in supply chain performance
- Awareness of innovations for sustainable supply chains

REFERENCES :

1. Sunil Chopra, Peter Meindl and DharamVirKalra, Supply Chain Management-Strategy Planning and Operation, Pearson Education, Sixth Edition, 2016.
2. Janat Shah, Supply Chain Management – Text and Cases, Pearson Education, 2009
3. Ballou Ronald H, Business Logistics and Supply Chain Management, Pearson Education, 5thEdition, 2007.
4. David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Designing and Managing the SupplyChain: Concepts, Strategies, and Cases, Tata McGraw-Hill, 2005.
5. Pierre David, International Logistics, Biztantra, 2011.

SC M	PO 1	PO 2	PO 3	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	3	3	2	1	3	3	1	2	1	1	1	3	1
CO2	3	3	1	2	3	1	3	2	1	1	1	1	2
CO3	3	3	2	1	3	2	3	3	1	1	2	3	3
CO4	2	1	2	3	3	1	3	3	3	1	2	1	1
CO5	1	3	3	2	2	3	1	2	3	1	3	1	1

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OBJECTIVE:

- To learn the various principles and practices of Quality Management

UNIT I INTRODUCTION 9

Introduction - Need for quality - Evolution of quality - Definition of quality. Concept of Quality –different perspectives. Concept of total Quality – Design, inputs, process and output - Attitude and involvement of top management. Customer Focus – customer perception - customer retention. Dimensions of product and service quality. Cost of quality.

UNIT II QUALITY MANAGEMENT PHILOSOPHIES AND PRICIPLES 9

Quality Gurus - Crosby, Deming, Masaaki Imai, Feigenbaum, Ishikawa, Juran, Oakland, Shigeo Shingo, and Taguchi. Concepts of Quality circle, Japanese 5S principles and 8D methodology.

UNIT III STATISTICAL PROCESS CONTROL 9

Statistical Process Control (SPC) – Meaning, Significance. construction of control charts for variables and attributes. Process capability – meaning, significance and measurement. Six sigma- concepts of process capability. Reliability concepts – definitions, reliability in series and parallel, product life characteristics curve. Total productive maintenance (TMP), Terotechnology. Business process Improvement (BPI) – principles, applications, reengineering process, benefits and limitations.

UNIT IV QUALITY TOOLS AND TECHNIQUES 9

Quality Tools - The seven traditional tools of quality, New management tools. Six-sigma, Bench marking, Poka-yoke, Failure Mode Effect Analysis (FMEA) – reliability, failure rate, FMEA stages, design, process and documentation. Quality Function Deployment (QFD) – Benefits, house of quality. Taguchi - quality loss function, parameter and tolerance design, signal to noise ratio.

UNIT V QUALITY MANAGEMENT SYSTEMS 9

Introduction Quality management systems – IS/ISO 9004:2000 – Quality System –Elements, Documentation guidelines for performance improvements. Quality Audits - QS 9000 – ISO 14000 –Concepts. TQM -culture, framework, benefits, awareness and obstacles. Employee involvement – Motivation, empowerment, Team and Teamwork, Recognition and Reward, Performance appraisal. Supplier - Selection, Partnering, Supplier Rating.

TOTAL: 45 PERIODS**OUTCOMES:**

- Understanding the evolution of Quality management
- Understanding of quality philosophies and practices
- Ability to apply statistical process control to enhance quality.
- Ability to apply quality tools to enhance organization's quality performance
- Awareness of quality management systems.

REFERENCES :

1. Dale H.Besterfield, Carol Besterfield-Michna, Glen H. Besterfield, Mary Besterfield - Sacre, Hemant Urdhwareshe, Rashmi Urdhwareshe, Total Quality Management (TQM), Fifth edition, Pearson Education, 2018.
2. Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, First Edition 2010
3. Poornima M. Charantimath, Total Quality Management, Pearson Education, Second Edition, 2011.
4. Douglas C. Montgomery, Introduction to Statistical Quality Control, Wiley Student Edition 4th Edition, Wiley India Pvt Limited, 2008.
5. Indian standard – quality management systems – Guidelines for performance improvement (Fifth Revision), Bureau of Indian standards, New Delhi.
6. Panneerselvam.R, Sivasankaran. P, Quality Management, PHI Learning, 2014.

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TQ M	PO 1	PO 2	PO 3	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	3	3	2	1	3	1	1	2	3	1	1	1	1
CO2	3	3	2	2	3	3	2	3	1	2	1	2	3
CO3	3	3	2	3	2	2	3	3	2	1	2	3	1
CO4	3	1	3	2	3	1	2	3	3	2	2	3	3
CO5	1	3	3	3	2	3	2	2	3	1	3	3	1

BA5012

MATERIALS MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE :

- To understand why materials management should be considered for profit in operations

UNIT I INTRODUCTION 9

Operating environment-aggregate planning-role, need, strategies, costs techniques, approaches-master scheduling-manufacturing planning and control system-manufacturing resource planning-enterprise resource planning-making the production plan

UNIT II MATERIALS PLANNING 9

Materials requirements planning-bill of materials-resource requirement planning-manufacturing resource planning-capacity management-scheduling orders-production activity control-codification.

UNIT III INVENTORY MANAGEMENT 9

Policy Decisions-objectives-control -Retail Discounting Model, Newsvendor Model; EOQ and EBQ models for uniform and variable demand With and without shortages -Quantity discount models. Probabilistic inventory models.

UNIT IV PURCHASING MANAGEMENT 9

Establishing specifications-selecting suppliers-price determination-forward buying-mixed buying strategy-price forecasting-buying seasonal commodities-purchasing under uncertainty-demand management-price forecasting-purchasing under uncertainty-purchasing of capital equipment-international purchasing

UNIT V WAREHOUSE MANAGEMENT 9

Warehousing functions – types - Stores management-stores systems and procedures-incoming materials control-stores accounting and stock verification-Obsolete, surplus and scrap-value analysis-material handling-transportation and traffic management -operational efficiency-productivity-cost effectiveness-performance measurement

TOTAL: 45 PERIODS

OUTCOMES :

- Understanding basics of materials management
- Understanding requirement analysis for material planning
- Ability to apply inventory management models
- Understanding purchasing practices
- Understanding storage in warehouse

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REFERENCES :

1. J.R.Tony Arnold, Stephen N. Chapman, Lloyd M. Clive, Materials Management, Pearson, 2012.
2. P. Gopalakrishnan, Purchasing and Materials Management, Tata McGraw Hill, 2012
3. A.K.Chitale and R.C.Gupta, Materials Management, Text and Cases, PHI Learning, 2nd Edition, 2006
4. A.K.Datla, Materials Management, Procedure, Text and Cases, PHI Learning, 2nd Edition, 2006
5. Ajay K Garg, Production and Operations Management, Tata McGraw Hill , 2012
6. Ronald H. Ballou and Samir K. Srivastava, Business Logistics and Supply Chain Management, Pearson education, Fifth Edition
7. S. N. Chary, Production and Operations Management, Tata McGraw Hill , 2012

MM	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	1	3	3	2	1	1	3	3	3	1
CO2	3	2	1	2	2	1	3	2	2	1	1	1	1
CO3	3	3	2	1	3	2	3	3	1	2	2	3	1
CO4	2	1	3	3	3	1	2	3	3	1	2	1	1
CO5	3	3	1	2	2	3	1	2	3	3	3	2	1

BA5013

SERVICES OPERATIONS MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To help understand how service performance can be improved by studying services operations management

UNIT I INTRODUCTION

9

Services – Importance, role in economy, service sector – nature, growth. Nature of services distinctive characteristics, Service Package, Service classification, service-dominant logic, open-systems view. Service Strategy –Strategic service vision, competitive environment, generic strategies, winning customers; Role of information technology; stages in service firm competitiveness.

UNIT II SERVICE DESIGN

9

New Service Development – Design elements – Service Blue-printing - process structure – generic approaches. Service Encounter – triad, creating service orientation, service profit chain; Front-office Back-office Interface– service decoupling. Technology in services – self-service, automation, e-commerce, e-business, technology innovations.

UNIT III SERVICE QUALITY

9

Service Quality- Dimensions, Service Quality Gap Model; Measuring Service Quality – SERVQUAL, Walk-through Audit, Quality service by design , Service Recovery, Service Guarantees. Process Improvement –productivity improvement - DEA, quality tools, benchmarking, Quality improvement programs.

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UNIT IV SERVICE FACILITY**9**

Supporting facility -Service scapes, Facility design – nature, objectives, process analysis, Service facility layout. Service Facility Location – considerations, facility location techniques – metropolitan metric, Euclidean, centre of gravity, retail outlet location, location set covering problem. Vehicle routing and Scheduling.

UNIT V MANAGING CAPACITY AND DEMAND**9**

Managing Demand – strategies; Managing capacity – basic strategies, supply management tactics, operations planning and control; Yield management; Inventory Management in Services– Retail Discounting Model, Newsvendor Model; Managing Waiting Lines –Queuing systems, psychology of waiting; Managing for growth- expansion strategies, franchising , globalization.

TOTAL: 45 PERIODS**OUTCOMES:**

- Appreciation of nature of service operations
- Ability to design services
- Ability to inculcate quality in service design and delivery
- Apply models to design service facility
- Ability to grow and sustain service business

REFERENCES :

1. James A. Fitzsimmons, Mona J, Fitzsimmons, Sanjeev Bordoloi, Service Management – Operations, Strategy, Information Technology, McGraw-Hill Education – 8th Edition 2018.
2. Richard D. Metters, Successful Service Operations Management, Cengage Learning, 2nd Edition, 2012.
3. Cengiz Haksever, Barry Render, Service Management, Pearson Education, 2013.
4. Robert Johnston, Graham Clark, Service Operations Management, Pearson Education, 2nd Edition, 2005.
5. Bill Hollins and Sadie Shinkins, Managing Service Operations, Sage, 2006.

scm	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	2	2	1	1	2	1	2	1
CO2	3	3	2	3	3	3	3	3	3	1	2	1
CO3	3	3	3	3	3	3	3	3	3	2	2	1
CO4	3	3	3	3	3	3	2	2	3	3	2	3
CO5	3	3	3	3	3	3	2	2	3	3	2	3

BA5014**PROCESS MANAGEMENT****L T P C
3 0 0 3****OBJECTIVE:**

- To provide with a comprehensive understanding of various tools that can be used in designing business processes

UNIT I INTRODUCTION**9**

The Process View of Organizations - Service and manufacturing processes – Nature of service Processes, process structure in services, Process structure in Manufacturing , Value Chain – Core and support processes, adding value with processes; Managing processes – process strategy –organization perspective, major process decisions; Embedding strategy into Manufacturing Processes - Process Competencies, Process Design – major factors, technology choice.

UNIT II PROCESS FLOW 9

Process Flow, Key Measures, Flow Time, Flow Rate, Process flow analysis – tools; process Mapping, Inventory Analysis, Process Flow Chart, Flow Time Measurement, Flow-Rate and Capacity Analysis, Managing Flow Variability; Work flow design principles and flows.

UNIT III PROCESS MODELING 9

Modeling - empirical models, deterministic models, stochastic models; simulating business Process – Application, simulation process, discrete event simulation, computer simulation

UNIT IV PROCESS IMPROVEMENT 9

Constraint Management – theory of constraints, Measuring capacity, Utilization , and performance in TOC, key principles ; Strategic Capacity Management –Tools for capacity planning, cycle time and capacity analysis; process layout – designing flexible flow layouts; Lean Systems – Toyota production system, characteristics of lean systems, continuous improvement, Kanban system Value stream mapping, JIT II; Process Synchronization and Improvement

UNIT V PROCESS OPTIMIZATION 9

Optimizing business process performance, Process Metrics, Business Intelligence, Process Dashboards – creating flexible organizations – optimization process– early management – capability development, sustainability; process benchmarking with data envelopment analysis

TOTAL: 45 PERIODS

OUTCOMES:

- Ability to design business processes that are in alignment with the external requirements
- Ability to analyze process flow
- Ability to apply models and simulate processes
- Ability to apply concepts to improve processes
- Ability to apply models to optimize processes

REFERENCES:

1. Manuel Laguna, Johan Marklund, Business Process Modeling, Simulation and Design, Pearson Education, 2011.
2. Lee J. Krajewski, Larry P. Ritzman, Manoj K. Malhotra, Operations Management – Processes and Supply Chain, Pearson Education, 9th Edition, 2010.
3. Ravi Anupindi, Sunil Chopra, Sudhakar Deshmukh, Jan A. Van Mieghem, and Eitan Zemel,
4. “Managing Business Process Flows: Principles of Operations Management” Pearson Education, 2006
5. Gerard Cachon, Christian Terweisch, Matching Supply with Demand – An Introduction to
6. Operations Management, McGraw Hill, International Edition, 2006.
7. Dennis McCarthy and Nick Rich, Lean TPM – A blueprint for change, Elsevier Ltd., 2004
8. Byron J. Finch, Operations Now – Supply chain Profitability and performance, Tata McGraw Hill, 3rd Edition, 2008.
9. G.Halevi and R.D.Weill, “Principles of Process Planning” Chappman and Hall, Madras 2012.

Process	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	3	3	3	3	1	2	1
CO2	3	3	2	3	3	3	3	3	3	1	1	1
CO3	3	3	3	3	3	3	3	3	3	2	2	3
CO4	3	3	3	3	3	3	2	2	3	3	1	3
CO5	3	3	3	3	3	3	2	2	3	3	2	3

OBJECTIVES:

- To treat the subject in depth by emphasizing on the advanced quantitative models and methods in logistics and supply chain management and its practical aspects and the latest developments in the field.

UNIT I INTRODUCTION**9**

Introduction to analytics – descriptive, predictive and prescriptive analytics, Data Driven Supply Chains – Basics, transforming supply chains, Barriers to implementation, Road Map.

UNIT II WAREHOUSING DECISIONS**9**

Mathematical Programming Models - P-Median Methods - Guided LP Approach - Balmer – Wolfe Method, Greedy Drop Heuristics, Dynamic Location Models, Space Determination and Layout Methods

UNIT III INVENTORY MANAGEMENT**9**

Inventory aggregation Models, Dynamic Lot sizing Methods, Multi-Echelon Inventory models, Aggregate Inventory system and LIMIT, Risk Analysis in Supply Chain - Measuring transit risks, supply risks, delivering risks, Risk pooling strategies.

UNIT IV TRANSPORTATION NETWORK MODELS**9**

Notion of Graphs, Minimal Spanning Tree, Shortest Path Algorithms, Maximal Flow Problems, Multistage Transshipment and Transportation Problems, Set covering and Set Partitioning Problems, Traveling Salesman Algorithms, Advanced Vehicle Routing Problem Heuristics, Scheduling Algorithms-Deficit function Approach and Linking Algorithms

UNIT V MCDMMODELS**9**

Analytic Hierarchy Process(AHP), Data Envelopment Analysis (DEA), Fuzzy Logic and Techniques, the analytical network process (ANP), TOPSIS-Application in SCM

TOTAL: 45 PERIODS**OUTCOMES:**

- Understanding of supply chain analytics fundamentals
- Ability to design warehouse models to enhance supply chain performance.
- Ability to analyse models and strategies in inventory management.
- Ability to understand network models in transportation.
- Ability to make decision using multi-criteria in applications of SCM

REFERENCES :

1. Nada R. Sanders, Big data driven supply chain management: A framework for implementing analytics and turning information into intelligence, Pearson Education, 2014.
2. Michael Watson, Sara Lewis, Peter Cacioppi, Jay Jayaraman, Supply Chain Network Design: Applying Optimization and Analytics to the Global Supply Chain, Pearson Education, 2013.
3. Anna Nagurney, Min Yu, Amir H. Masoumi, Ladimer S. Nagurney, Networks Against Time: Supply Chain Analytics for Perishable Products, Springer, 2013.
4. Muthu Mathirajan, ChandrasekharanRajendran, SowmyanarayananSadagopan, ArunachalamRavindran, ParasuramBalasubramanian, Analytics in Operations/Supply Chain Management , I.K. International Publishing House Pvt. Ltd., 2016.
5. Gerhard J. Plenert, Supply Chain Optimization through Segmentation and Analytics, CRC Press, Taylor & Francis Group, 2014.

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SCA	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	1	2	2	1	2	2	1	1	3	3
CO2	3	2	1	3	3	1	3	2	1	2	3	1	3
CO3	2	3	3	1	2	2	2	3	1	1	2	3	3
CO4	2	1	2	3	3	1	3	3	3	3	2	1	2
CO5	1	2	3	2	2	3	1	2	3	1	3	2	1

BA5016

PROJECT MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To learn the fundamental principles and practices of managing projects.

UNIT I INTRODUCTION TO PROJECT MANAGEMENT 9

Project Management – Definition –Goal - Lifecycles. Project Environments. Project Manager – Roles- Responsibilities and Selection.

UNIT II PLANNING, BUDGETING AND RISK MANAGEMENT 9

The Planning Process – Work Break down Structure. Cost Estimating and Budgeting - Process, Summaries, schedules and forecasts. Managing risks - concepts, identification, assessment and response planning.

UNIT III SCHEDULING & RESOURCE ALLOCATION 9

PERT & CPM Networks - Project durations and floats - Crashing – Resource loading and leveling. Simulation for resource allocation. Goldratt’s Critical Chain.

UNIT IV PROJECT ORGANISATION & CONFLICT MANAGEMENT 9

Formal Organisation Structure – Organisation Design – Types of project organizations. Conflict – Origin & Consequences. Project Teams. Managing conflict – Team methods for resolving conflict.

UNIT V CONTROL AND COMPLETION 9

Project Control – Process, Monitoring, Internal and External control, Performance analysis, Performance Index Monitoring. Project Evaluation, Reporting and Termination. Project success and failure - Lessons.

TOTAL: 45 PERIODS

OUTCOMES:

- Ability to understand the roles and responsibilities of a project manager
- Ability to plan and budget projects
- Ability to schedule and allocate resources to projects
- Ability to manage project organization
- Ability to control and complete projects

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REFERENCES:

1. John M. Nicholas, Project Management for Business and Technology - Principles and Practice, Second Edition, Pearson Education, 2006.
2. Clifford Gray and Erik Larson, Project Management, Tata McGraw Hill Edition, 2005.
3. Gido and Clements, Successful Project Management, Seventh Edition, Thomson Learning, 2017.
4. Samuel J.M., Jack R.M., Scott M.S., Margaret M.S., and Gopalan M.R., Project Management, First Indian edition, Wiley-India, 2006.
5. Harvey Maylor, Project Management, Third Edition, Pearson Education, 2006.
6. Panneerselvam. R, Senthilkumar. P, Project Management, PHI Learning, 2009.

Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	3	3	3	3	1	2	2
CO2	3	3	2	3	3	3	3	3	3	1	1	2
CO3	3	3	3	3	3	3	3	3	3	2	2	3
CO4	3	3	3	3	3	3	2	2	3	3	1	3
CO5	3	3	3	3	3	3	2	2	3	3	2	3

BA5017**PRODUCT DESIGN****L T P C**
3 0 0 3**OBJECTIVE:**

- To understand the application of structured methods to develop a product

UNIT I PRODUCT DESIGN & DEVELOPMENT 9

Product design & development - characteristics, duration and cost, challenges; Development Process - Generic Process, Concept development, Adapting to product types; Product Planning - Process, Understanding customer need, Product Specification; Concept Generation Evaluation - decay curve, cost expenditure curve; Technology Life Cycle; Disruptive Technologies.

UNIT II PRODUCT CONCEPT 9

Concept Selection – Importance, Methodology, concept Screening, Concept Scoring, Concept Testing; Product Architecture - Definition, Modularity, implication, Establishment, Delayed Differentiation, Platform Planning.

UNIT III PRODUCT DATA MANAGEMENT 9

PDM - concept and benefits, functions, Product data and workflow, Product reliability, CIM data, Architecture of PDM systems, Product data interchange, Portal integration, PDM acquisition and implementation; Product Life Cycle management - strategy, Change management for PLM.

UNIT IV DESIGN TOOLS 9

Design Approaches - Industrial Design, Design for Manufacturing, Value Engineering, Ergonomics, Robust Design, Design for Excellence; Collaborative Product development-Prototyping, failure rate curve, product use testing-Product development economics, scoring model, financial analysis.

UNIT V PATENTS 9

Intellectual Property and Patents -Definitions, Patent Searches, Application, Patent Ownership and Transfer, Patent Infringement, New Developments and International Patents.

TOTAL: 45 PERIODS

OUTCOMES:

- Understanding the designing and developing the product
- Understanding the basic concept of the product
- Understanding management of product data
- Ability to apply design tools to enhance product performance
- Awareness of patenting new products.

REFERENCES :

1. Karl T. Ulrich, Steven D. Eppinger, Anita Goyal Product Design and Development, Tata McGraw – Hill, Fourth Edition, reprint 2009.
2. Kenneth B.Kahn, New Product Planning, Sage, 2010.
3. A.K. Chitale and R.C. Gupta, Product Design and Manufacturing, PHI, 2008.
4. Deborah E. Bouchoux, Intellectual Property Rights, Delmar, Cengage Learning, 2005.
5. Michael Grieves, Product Life Cycle Management, Tata McGraw Hill , 2006.

PD	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	1	3	3	2	1	2	1	3	1	3	1
CO2	3	2	3	2	3	1	3	2	1	1	1	1	3
CO3	2	3	2	1	3	2	3	3	1	2	2	3	1
CO4	2	1	3	3	3	1	2	2	3	1	2	1	2
CO5	1	2	3	2	2	3	1	2	3	2	3	3	1

BA5018**LEAN SIX SIGMA****L T P C
3 0 0 3****OBJECTIVE:**

- To gain insights about lean six sigma as a methodology to improve business processes and also to understand the metrics that strives for near perfection

UNIT I UNDERSTANDING LEAN SIX SIGMA 9

Lean Thinking - Basics, principles; Six Sigma Methodology -Identification, Prioritization and Selection of Improvement opportunities; Six Sigma implementation - Overview, Roles & Responsibilities; Tools - DMAIC, DFSS , DMADV.

UNIT II DEVELOPMENT OF BUSINESS CASES 9

Cost of Poor Quality (COPQ), Cost of Doing Nothing, CTQ Tree, Translating the needs of the customer into the specific requirements - Development of Project Team and Charter, Define and Map Processes to be improved (SIPOC / COPIS); Voice of Customer, Identification of Critical to Customer (CTC) / Critical to Business (CTB) characteristics.

UNIT III THE SCOPE OF TOOLS AND TECHNIQUES 9

Data Collection planning, Understanding of Prioritization Matrix , FMEA, Type of Data, Measurement System Evaluation (Gauge R&R) for variables as well as attribute data, Understanding variation - special causes vs. common causes through dot plots, box plots, histogram and control charts, Stratification methods through Pareto, Bar Diagrams, stratified dot plot, etc; Evaluation of Process Capability and Sigma level.

UNIT IV PROCESS MAPPING ESSENTIALS 9

Activity flow chart, identification of Value-added and Non-value-added activities (Lean Sigma), Organizing for potential causes - Cause and effect diagram, Verification/validation of causes using workplace investigation - GEMBA, Statistical tools; Concepts of industrial experimentation.

Attested

UNIT V EVALUATION AND CONTINUOUS IMPROVEMENT METHODS 9

Deploying Lean Six Sigma, Selection and prioritization of solutions - Concept of risk analysis, pilot and full-scale implementation. process control plans, Evaluation, monitoring mechanism (SPC), process audits, the economics of six sigma quality Return on six Sigma (ROSS), ROI, comparison of results after implementation of the solutions, institutionalization and integration of the solutions, closing of the project.

TOTAL: 45 PERIODS**OUTCOMES:**

- Understanding basics of lean six sigma
- Ability to develop business cases
- Ability to apply tools and techniques of lean six sigma to increase productivity
- Ability to map processes
- Ability to evaluate processes and apply continuous improvement

REFERENCES:

1. John Morgan, Martin Brenig-Jones, Lean Six Sigma for Dummies, John Wiley & Sons Ltd., 2016.
2. Michael L.George, David Rowlands, Marle Price, John Maxey, The Lean Six Sigma Pocket Toolbook, McGraw Hill, 2016.
3. Michael L.George, David Rowlands, Bill Kastle, What is Lean Six Sigma, McGraw – Hill 2003.
4. Thomas Pyzdek, The Six Sigma Handbook, McGraw-Hill, 5 th edition, 2008.
5. Forrest W. Breyfogle, III, James M. Cupello, Becki Meadows, Managing Six Sigma:A Practical Guide to Understanding, Assessing, and Implementing the Strategy That Yields Bottom-Line Success, John Wiley & Sons, 2000.

Lean	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	3	3	3	3	1	2	1
CO2	3	3	2	3	3	3	3	3	3	1	1	1
CO3	3	3	3	3	3	3	3	3	3	2	2	3
CO4	3	3	3	3	3	3	2	2	3	3	1	3
CO5	3	3	3	3	3	3	2	2	3	3	2	3

BA5019**ROBUST DESIGN**

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OBJECTIVE:

- To learn about effective methods of experimental research design

UNIT I INTRODUCTION 9

Introduction to robust design - Robust Design and Experiments -Planning of experiments - Overview of quality by design - Quality loss function -ANOVA rationale -Single Factor Experiments.

UNIT II FACTORIAL EXPERIMENTS 9

Basic Definition and Principles - Two factor factorial design - tests on means - EMS rule - 2 K and 3 K factorial designs -Fractional factorial design.

UNIT III SPECIAL EXPERIMENTAL DESIGNS 9

Randomized blocks - Latin square design - Blocking and confounding - Response Surface method - Nested designs.

Attested

OUTCOMES:

1. To provide insights on retail operation
2. To understand effective methods and strategies required for retail management.
3. To understand how to utilize resources and techniques used in retail management.
4. To understand analysis of store location, merchandising, products and pricing.
5. To gain knowledge about shopping behaviour

REFERENCES :

1. Michael Havy, Baston, Aweitz and Ajay Pandit, Retail Management, Tata Mcgraw Hill, Sixth Edition, 2007
2. Ogden, Integrated Retail Management, Biztantra, India, 2008.
3. Patrick M. Dunne and Robert F Lusch, Retailing, Thomson Learning, 4th Edition 2008.
4. Chetan Bajaj, Rajnish Tow and Nidhi V. Srivatsava, Retail Management, Oxford University Press, 2007.
5. Swapna Pradhan, Retail Management -Text and Cases, Tata McGraw Hill, 3rd Edition, 2009.
6. Dunne, Retailing, Cengage Learning, 2nd Edition, 2008
7. Ramkrishnan and Y.R.Srinivasan, Indian Retailing Text and Cases, Oxford University Press, 2008
8. Dr.JaspreetKaur , Customer Relationship Management, Kogent solution.

Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	3	3	3	2	2	3	2	1	1	2	1
II	3	3	2	2	2	3	3	2	2	2	2	2
III	3	3	3	3	2	3	3	2	3	3	3	3
IV	2	2	2	2	3	3	2	2	2	2	1	3
V	2	2	3	3	3	3	3	3	2	2	1	1

BA5021

CONSUMER BEHAVIOR

L T P C
3 0 0 3

OBJECTIVE:

- To study and understand the consumer' behavior in-order to effectively utilise the market' potential

UNIT I INTRODUCTION 9

Understanding Consumer behaviour - Consumption, Consumer orientation, Interpretive and Quantitative approaches - Effects of Technology, Demographics and Economy on Consumer behaviour.

UNIT II INTERNAL INFLUENCES 9

Influences on consumer behavior – motivation – perception – Attitudes and Beliefs - Learning and Experience - Personality & Self Image.

UNIT III EXTERNAL INFLUENCES 9

Socio-Cultural, Cross Culture - Family group – Reference group – Communication - Influences on Consumer behavior

UNIT IV CONSUMER BEHAVIOR MODELS 9

Traditional and Contemporary Consumer behaviour model for Individual and industrial buying behaviour and decision making.

UNIT V PURCHASE DECISION PROCESS**9**

Consumer decision making process – Steps, Levels and decision rules - Evolving Indian consumers – Opinion Leadership - Diffusion and Adoption.

TOTAL: 45 PERIODS**OUTCOMES:**

The student understands

1. Consumer orientation and consumption
2. Intrinsic influences
3. Effects of external influences
4. Models of consumer and industrial buying
5. The decision making process

REFERENCES :

1. RamanujMajumdar, Consumer Behaviour - Insights from Indian Market, PHI, 2010.
2. Leon G.Schiffman and Leslie LasarKanuk, Consumer Behavior, Pearson Education, India, ninth edition, 2010.
3. Barry J.B., Eric G.H., Ashutosh M., Consumer Behaviour - A South Asian Perspective, Cengage Learning, 2016.
4. Paul Peter et al., Consumer Behavior and Marketing Strategy, Tata McGraw Hill, Indian Edition, 7th Edition 2005.

CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	3	3	1	2	2	1	1	3	2	1	2	1
II	1	2	1	2	2	2	3	2	1	1	1	1
III	3	3	3	1	3	3	3	3	3	2	3	1
IV	3	2	2	2	2	2	1	1	1	1	1	1
V	3	3	3	2	3	3	3	3	3	1	1	1

BA5022**INTEGRATED MARKETING COMMUNICATIONS**

L T P C
3 0 0 3

OBJECTIVE:

- This course introduces students to the essential concepts and techniques for the development and designing an effective Integrated Marketing Communication programme.

UNIT I AN INTRODUCTION TO INTEGRATED MARKETING COMMUNICATION (IMC)**9**

An Introduction to Integrated Marketing Communication (IMC): Meaning and role of IMC in Marketing process, one voice communication V/s IMC. Introduction to IMC tools – Advertising, sales promotion, publicity, public relations, and event sponsorship; The role of advertising agencies and other marketing organizations providing marketing services and perspective on consumer behaviour

UNIT II UNDERSTANDING COMMUNICATION PROCESS**9**

Understanding communication process: Source, Message and channel factors, Communication response hierarchy- AIDA model, Hierarchy of effect model, Innovation adoption model, information processing model, The standard learning Hierarchy, Attribution Hierarchy, and low 20% involvement hierarchy Consumer involvement- The Elaboration Likelihood (ELM) model, The Foote, Cone and Belding (FCB) Model

Attested

UNIT III PLANNING FOR MARKETING COMMUNICATION (MARCOM) 9

Establishing marcom Objectives and Budgeting for Promotional Programmes-Setting communication objectives, Sales as marcom objective, DAGMAR approach for setting ad objectives. Budgeting for marcom-Factors influencing budget, Theoretical approach to budgeting viz. Marginal analysis and Sales response curve, Method to determine marcom budget

UNIT IV DEVELOPING THE INTEGRATED MARKETING COMMUNICATION PROGRAMME 9

Planning and development of creative marcom, Creative strategies in advertising, sales promotion, publicity, event sponsorships etc. Creative strategy in implementation and evaluation of marcom- Types of appeals and execution styles. Media planning and selection decisions- steps involved and information needed for media planning. Measuring the effectiveness of all Promotional tools and IMC.

UNIT V DIGITAL MEDIA & ADVERTISING 9

Digital Media, Evolution of Technology, Convergence of Digital Media, E- Commerce and Digital Media, Advertising on Digital Media, Social Media, Mobile Advertising, E-PR Advertising Laws & Ethics: Advertising & Law, Advertising & Ethics

TOTAL: 45 PERIODS**OUTCOMES:**

1. To review and give a general understanding of the basics of traditional communication forms, such as advertising, personal selling, sales promotion and indirect promotion within various delivery vehicles from broadcast to targeted social media.
2. This course introduces students to the essential concepts and techniques for the development and designing an effective Integrated Marketing Communication programme.
3. To Know how IMC fits into the marketing mix.
4. To develop an awareness about marketing communications tools, and how each can be used effectively- individually or in an integrated mix.
5. To examine the process by which integrated marketing communications programs are planned, developed, executed and measured.

REFERENCES:

1. Advertising & Promotion- An Integrated Marketing Communications Perspective, George Belch, Michael Belch &KeyoorPurani, TATA McGraw Hill 8th edition
2. Wells, Moriarty & Burnett, Advertising, Principles & Practice, Pearson Education, 7th Edition, 2007. Kenneth Clow. Donald Baack, Integrated Advertisements, Promotion and Marketing communication, Prentice Hall of India, New Delhi, 3rd Edition, 2006.
3. Terence A. Shimp and J.Craig Andrews, Advertising Promotion and other aspects of Integrated Marketing Communications, CENGAGE Learning, 9th edition, 2016
4. S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 3rd Revised edition edition, 2008.
5. Julian Cummings, Sales Promotion: How to Create, Implement and Integrate Campaigns that Really Work, Kogan Page, London, Fifth Edition Edition ,2010.
6. JaishriJefhwaney, Advertising Management, Oxford University Press, 2nd Edition, 2013.
7. Dr Niraj Kumar, Integrated Marketing Communication,Himalaya Publishing House 2015

Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	2	1	2	3	3	2	3	3	2	2	2
II	3	3	2	3	3	3	3	3	2	1	2	2
III	2	3	2	2	3	3	2	2	3	3	2	3
IV	3	1	2	3	2	3	2	2	3	1	1	2
V	2	3	2	2	2	2	1	2	1	1	1	2

OBJECTIVES:

- To appreciate the challenges involved in managing the services and analyse the strategies to deal with these challenges.
- To give insights about the foundations of services marketing, customer expectations of services and gap existing in the service delivery processes and service Quality.

UNIT I INTRODUCTION 9

Introduction– Definition – Service Economy – Evolution and growth of service sector – Nature and Scope of Services –Difference between services and tangible products– Unique characteristics of services– Challenges and issues in Services Marketing.

UNIT II SERVICE MARKETING OPPORTUNITIES 9

Assessing service market potential – Classification of services – Expanded marketing mix – Service marketing – Environment and trends – Service market segmentation, targeting and positioning.

UNIT III SERVICE DESIGN AND DEVELOPMENT 9

Service Life Cycle – New service development – Service Blue Printing – GAP model of service quality – Measuring service quality – SERVQUAL – Service Quality function development.

UNIT IV SERVICE DELIVERY AND PROMOTION 9

Positioning of services – Designing service delivery System, Service Channel – Pricing of services, methods – Service marketing triangle – Managing demand, Managing supply, managing Demand and Supply of Service–Integrated Service marketing communication.

UNIT V SERVICE STRATEGIES 9

Service Marketing Strategies for Health – Hospitality – Tourism – Financial – Logistics– Educational – Marketing of Online Services– Entertainment & public utility Information technique Services

TOTAL: 45 PERIODS**OUTCOMES:**

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

- Demonstrate an extended understanding of the similarities and differences in service-based and physical product based marketing activities;
- Develop and justify marketing planning and control systems appropriate to service-based activities
- Demonstrate integrative knowledge of marketing issues associated with service productivity, perceived quality, customer satisfaction and loyalty
- Develop blueprint for the services sector and develop a better appreciation of the necessary strategies to create a service excellence.
- Recognise the challenges faced in services delivery as outlined in the services gap model

REFERENCES :

1. Chiristopher H. Lovelock and JochenWirtz, Services Marketing: People, Technology, strategy Pearson Education, New Delhi,8th edition, 2016.
2. John.E.G.Bateson, K.Douglas Hoffman, Services Marketing, South Western Cengage learning, 4th Edition, 2011.
3. Kenneth E Clow, et al, Services Marketing Operation Management and Strategy, Biztantra, 2nd Edition, New Delhi, 2004.
4. Valarie Zeithaml et al, Services Marketing, 5th International Edition, Tata McGraw Hill, 2007.
5. Christian Gronroos, Services Management and Marketing a CRM in Service Competition, 3rdEdition,Wiley,2007.

6. R. Srinivasan, SERVICES MARKETING, Prentice Hall of India Private Limited, 4th Edition 2014, New Delhi.
7. Vinnie Jauhari & Kirti Dutta (2017), Services Marketing, Text and cases, 2nd edition.

Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	2	2	1	3	3	1	1	3	1	1	1
II	3	3	1	1	3	2	1	1	3	2	1	1
III	3	3	2	2	1	2	3	1	3	1	2	3
IV	2	3	2	1	3	3	1	1	2	1	1	1
V	3	2	3	2	1	2	1	3	1	1	3	3

BA5024

SALES AND DISTRIBUTION MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To gain insights into the selling and distribution process.

UNIT I INTRODUCTION

9

Sales management - nature and scope. Sales management positions. Personal Selling - Scope, theories and strategies. Sales forecasting and budgeting decisions. Online selling - scope, potential, Merits and Demerits.

UNIT II PERSONAL SELLING PROCESS, SALES TERRITORIES & QUOTAS

9

Selling process and relationship selling. Designing Sales Territories and quotas. Sales organisation structures.

UNIT III MANAGING THE SALES FORCE

9

Sales force - recruitment, selection, training, motivating, compensation and control.

UNIT IV MANAGING DISTRIBUTION CHANNELS

9

Distribution Management - Introduction, need and scope. Channels - Strategies and levels, retailing and wholesaling. Designing channel systems and channel management.

UNIT V BASICS OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

9

Logistics - Scope, definition and components. Managing FG Inventory & warehousing. Transportation - Scope, Modes and role in Supply Chain effectiveness. Use of Information Technology in Online Selling and Goods tracking.

TOTAL: 45 PERIODS

OUTCOMES:

The student get to learn about

1. the basics of sales management, theories and strategies
2. the process of personal and relationship selling
3. managing sales force
4. managing distribution channels
5. inventory and supply chain.

Attested

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REFERENCES:

1. Krishna K. Havaladar, Vasant M. Cavale, Sales and Distribution Management - Text and Cases, Third Edition, McGraw Hill Education, 2017
2. Gupta S.L., Sales and Distribution Management - Text and Cases - An Indian Perspective, Excel Books, 2008
3. Pingali Venugopal, Sales and Distribution Management - An Indian Perspective, Response Books from Sage Publications, 2008.

CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	1	2	1	1	1	1	1	2	2	1	1	1
II	3	2	1	1	2	3	3	2	2	2	2	1
III	3	3	3	3	3	3	3	1	3	2	1	2
IV	3	3	3	3	3	3	2	3	3	2	1	2
V	2	3	1	2	2	2	1	3	1	1	1	1

BA5025**PRODUCT AND BRAND MANAGEMENT**
L T P C
3 0 0 3
OBJECTIVES :

- To help the students appreciate the relationship between Corporate Strategy and Product and Brand Management
- To provide a framework to understand the new product development process, the organisational structures for new product development and product management functions within an organisation
- To explore the various issues related to Brand Management and to enhance the understanding and appreciation of this important intangible strategic asset, including brand associations, brand identity, brand architecture, leveraging brand assets, brand portfolio management etc.

UNIT I**9**

Management of New Product Development Process - Managing Product Life cycle -Brands and Branding- Introduction to Brand Management -Brand Management Process - Brand Choice Decisions and Models.

UNIT II**9**

Product Plans-Elements of Branding- Brand Identity -Brand Communication -Brand Positioning -Brand Image and Personality - Valuation of Brands- Brand Valuation -Brand Tracking and Monitoring.

UNIT III**9**

Marketing Mix Factors and Products-Managing Brand Over Time- Building Brands in Indian Market - Launching a New Brand -Revitalizing Brands - Branding Strategies- Brand Extension Strategies - Brand Portfolio Management- Managing Brands Across Geographical Borders.

UNIT IV**9**

Managing Brand Experience - Digital Branding-Employment Branding - Co-branding- Brand extension scorecard-Culture and branding-Brand flashbacks-Future brand priorities.

UNIT V**9**

Advertising -Brand Name Plan- Pricing Systems -Product Distribution Systems -Advertising and Sales Promotion - Product Sales Management -Product and Public Relations Service Product Marketing -Industrial Product Marketing Product Exports and International Marketing -Critical Success Factors in Brand Management.

TOTAL: 45 PERIODS

OUTCOMES :

- CO1. On successful completion of the course students will be able to:
- CO2. Apply the fundamental concepts of product and brand development and management.
- CO3. Use the brand positioning framework to develop a brand, keep it relevant, expand a brand internationally, and reposition a brand.
- CO4. Use tools and metrics to analyse competitors and develop positioning strategies.
- CO5. Recognize the importance of using teams and organization to coordinate multiple interdisciplinary tasks in order to create and manage products within an organization.
- CO6. Apply an understanding of the product manager's role in product pricing, sales, and promotion.

REFERENCES :

1. Strategic Brand Management: Building, Measuring, and Managing Brand Equity, by Kevin lane Keller;Ambi M. G. Parameswaran; IssacJacob;Fourth edition; Pearson Education India; 2015; ISBN-10: 9789332542204; ASIN: 9332542201
2. Product and Brand Management Tapan K. Panda Paperback: 888 pages Publisher: Oxford University Press; First edition (January 2016);ISBN-10: 9780199460496; ISBN-13: 978-0199460496; ASIN: 0199460493
3. Product and brand management by U C Mathur;Publisher: Excel Books (December 2012)ISBN-10: 9350620146;ISBN-13: 978-9350620144

Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	2	2	1	3	3	1	1	2	1	1	1
II	3	3	2	1	3	1	1	2	1	1	1	1
III	3	3	3	2	1	1	2	1	3	1	2	3
IV	3	3	2	2	3	3	2	1	1	1	1	1
V	3	2	2	1	2	2	2	3	1	1	2	2

BA5026**DIGITAL MARKETING****L T P C
3 0 0 3****OBJECTIVES :**

- The primary objective of this module is to examine and explore the role and importance of digital marketing in today's rapidly changing business environment.
- It also focusses on how digital marketing can be utilised by organisations and how its effectiveness can be measured.

UNIT I**9**

Online Market space- Digital Marketing Strategy- Components -Opportunities for building Brand- Website - Planning and Creation- Content Marketing.

UNIT II**9**

Search Engine optimisation - Keyword Strategy- SEO Strategy - SEO success factors - On-Page Techniques - Off-Page Techniques. Search Engine Marketing- How Search Engine works- SEM components- PPC advertising -Display Advertisement

UNIT III**9**

E- Mail Marketing - Types of E- Mail Marketing - Email Automation - Lead Generation - Integrating Email with Social Media and Mobile- Measuring and maximising email campaign effectiveness. Mobile Marketing- Mobile Inventory/channels- Location based; Context based; Coupons and offers, Mobile Apps, Mobile Commerce, SMS Campaigns-Profiling and targeting.

UNIT IV**9**

Social Media Marketing - Social Media Channels- Leveraging Social media for brand conversations and buzz. Successful /benchmark Social media campaigns. Engagement Marketing-Building Customer relationships - Creating Loyalty drivers - Influencer Marketing.

UNIT V**9**

Digital Transformation & Channel Attribution- Analytics- Ad-words, Email, Mobile, Social Media, Web Analytics - Changing your strategy based on analysis- Recent trends in Digital marketing.

TOTAL : 45 PERIODS**OUTCOMES :**

1. To examine and explore the role and importance of digital marketing in today's rapidly changing business environment.
2. To focusses on how digital marketing can be utilised by organisations and how its effectiveness can measured.
3. To know the key elements of a digital marketing strategy
4. To study how the effectiveness of a digital marketing campaign can be measured
5. To demonstrate advanced practical skills in common digital marketing tools such as SEO, SEM, Social media and Blogs.

REFERENCES:

1. Fundamentals of Digital Marketing by Puneet Singh Bhatia;Publisher: Pearson Education; First edition (July 2017);ISBN-10: 933258737X;ISBN-13: 978-9332587373.
2. Digital Marketing by Vandana Ahuja ;Publisher: Oxford University Press (April 2015)
3. ISBN-10: 0199455449;ISBN-13: 978-0199455447
4. Marketing 4.0: Moving from Traditional to Digital by Philip Kotler;Publisher: Wiley; 1st edition (April 2017); ISBN10: 9788126566938;ISBN13: 9788126566938;ASIN: 8126566930
5. Ryan, D. (2014). Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, Kogan Page Limited.
6. Pulizzi,J Beginner's Guide to Digital Marketing , Mcgraw Hill Education.
7. Barker, Barker, Bormann and Neher(2017), Social Media Marketing: A Strategic Approach, 2E South-Western ,Cengage Learning.

Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	3	3	3	3	3	2	2	2	1	1	1
II	2	2	3	2	3	3	3	2	2	3	3	3
III	1	2	2	3	3	2	2	2	3	2	2	2
IV	3	3	3	3	3	3	3	1	3	1	1	1
V	2	2	3	3	3	3	3	2	2	2	2	2

BA5027**INTERNATIONAL MARKETING****L T P C
3 0 0 3****OBJECTIVES:**

- To understand the principles & concepts in international Marketing to provide the knowledge of marketing management in the international perspective to develop marketing strategies for the dynamic international markets.

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UNIT I INTRODUCTION 9

International markets – Definition – Basic modes of entry – Nature of International Marketing- Benefits of International Marketing-- International Marketing Task – World Trade – India’s Foreign Trade – Characteristics of MNCs - Global and Domestic marketing - International Product Life cycle – EPRG Framework - Institutional set up – Advisory bodies – Commodity organizations – Service Institutions – Government participation in Foreign Trade

UNIT II INTERNATIONAL MARKETING ENVIRONMENT 9

Business culture around the world- language, customs, attitudes - marketing strategy adjustments - product adaptations. Geographic Description of Market – Political risk – Political Environment - Import quotas – tariffs - customs restrictions - required licenses – registrations – permits. Development and scope of International law – INCOTERMS – WTO – GATT - Current economic conditions of the country or countries involved - credit worthiness of the international buyer/seller – Regional economic groupings its influences in market.

UNIT III POLICY FRAMEWORK AND PROCEDURAL ASPECTS 9

India’s Export – Import policy – Exim Policy – promotional measures - Export oriented Units – Deemed Exports - Export- Import Documentation – Kinds of Documents – Principal Export Documents – Auxiliary documents – Documents in Import Trade – Export Documentation and procedures - Demand Estimation – GDP – Producer consumer target – Market segmentation.

UNIT IV INTERNATIONAL MARKETING PLANNING 9

International Market Selection – Factors influencing – Process – Strategies and approaches – Competition-International Marketing research – Global scene- International marketing research procedure – Techniques – survey – interview techniques – Analysis of field data – Research report-International Marketing Planning and Control – Framework – marketing control – Control sequence-

UNIT V INTERNATIONAL MARKETING MIX 9

Developing an International Product Line, Foreign Product Diversification, International Branding Decisions, International Packaging, International Warranties and Services. International Pricing Strategy - International Promotion Strategies- Promotion Mix- International Sales Negotiations - Patterns of Global Advertising, Global Advertising Regulations, Advertising Media, International Channels of Distribution- Retailing in International Scenario, International Physical Distribution - Technological Influences in international Marketing-Current trends in international Marketing.

TOTAL: 45 PERIODS

OUTCOMES:

1. To understand the principles & concepts in international Marketing
2. To provide the knowledge of marketing management in the international perspective
3. To study to develop marketing strategies for the dynamic international markets.
4. To study the most important forces behind international trade,
5. To know the guidelines for establishing foreign business operations,

REFERENCES :

1. Global Marketing, Third Edition, by Warren J. Keegan and Mark C. Green, Prentice Hall, N.J. ninth edition, 2018. (ISBN 0-13-066998-9)
2. Philip .R. Cateora, John.L.Graham. PrasanthSalwan. International Marketing, Tata McGraw Hill,13th edition, (2008)
3. Onkvisit, Sak., and John J.Shaw., International Marketing, Prentice Hall of India, New Delhi, 1997.
4. Ashok Korwar, Creating Markets across the Globe, Tata McGraw Hill, New Delhi, 1997
The Lexus and the Olive Tree: Understanding Globalization by Thomas L. Friedman, Anchor
5. Books, May 2000. ISBN: 0-385-40034.

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Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	2	3	3	3	3	3	2	2	2	2	2
II	3	3	3	3	3	3	1	1	3	2	2	2
III	2	1	1	2	3	3	3	3	3	3	2	2
IV	2	1	1	3	3	3	2	2	2	1	2	2
V	2	2	2	2	3	2	2	2	2	2	2	2

BA5028

MARKETING ANALYTICS

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3 0 0 3

OBJECTIVE :

- This course will provide you with an introduction to marketing analytics. We will study various tools for generating marketing insights from empirical data in such areas as segmentation, targeting and positioning, satisfaction management, customer lifetime analysis, customer choice, and product and price decisions using conjoint analysis

UNIT I INTRODUCTION TO MARKETING ANALYTICS 9

Evolution and Scope of Analytics. Data for Marketing Analytics. Decision Models – Descriptive, Predictive and Prescriptive Models. Problem Solving and Decision making process.

UNIT II DATA MANAGEMENT 9

Exploring Data; Frequencies; Descriptive Statistics Cross tabulations; Independent Samples t-Test; One-Way ANOVA Simple Regression and Correlation, Multiple Regression to Forecast sales, Modelling Trend and Seasonality, Ratio to Moving Average Method

UNIT III CUSTOMER SEGMENTATION AND VALUATION 9

Analytics for Segmentation – Introduction to Cluster analysis multivariate method. Estimation, Model performance and validation of assumptions for Cluster analysis. Customer Value Analysis, Customer Lifetime Value-Conjoint Analysis

UNIT IV METRICS AND MEASUREMENTS ANALYTICS 9

Product and Price analytics-Conjoint Analysis -Pricing - Estimating Demand Curves and Optimize Price Retailing Analytics-Allocating Retail Space and Sales Resources-Market Basket Analysis. Advertising and Promotion Analytics-Promotion Analytics-Measuring the effectiveness of Advertising

UNIT V WEB ANALYTICS 9

Search Engine Optimisation- Tracking the success of SEO. Web metrics - Google Ad words, Advertising & Analytics.

TOTAL: 45 PERIODS

OUTCOMES:

1. This course will provide with an introduction to marketing analytics.
2. To show the benefits of using a systematic and analytical approach to marketing decision-making.
3. To help students develop analytic competencies pertaining solving of marketing problems
4. To study various tools for generating marketing insights from empirical data in such areas as segmentation, targeting and positioning, satisfaction management, customer lifetime analysis, customer choice, and product and price decisions using conjoint analysis
5. To understand the recent practices scientific and empirical approach by case studies

REFERENCES:

1. Evans, J.R. (2012). Business analytics methods, models and decisions. New Jersey: Pearson, Upper Saddle River.
2. Sorger, Stephan. —Marketing Analytics: Strategic Models and Metrics. II Admiral Press/ CreateSpace, 2013
3. Cases and data sets for hands on learning. Pearson Education.
4. Grigsby, M. (2015). Marketing Analytics: A Practical Guide to Real Marketing Science. Kogan Page Publishers.
5. Sathi, A. (2014). Engaging customers using big data: how Marketing analytics are transforming Business. Palgrave Macmillan.
6. Rao, P. H. (2011). Predictive modeling for strategic marketing. New Delhi. Prentice Hall India

Course Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	2	2	3	2	3	2	2	1	2	2	2	2
II	3	2	2	2	2	2	2	2	2	2	2	2
III	3	3	3	3	3	2	2	2	2	2	2	2
IV	3	2	3	2	2	3	2	2	2	2	3	3
V	3	2	2	3	3	3	3	3	2	2	2	2

BA5029**STRATEGIC HUMAN RESOURCE MANAGEMENT**

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OBJECTIVE:

- To help students understand the transformation in the role of HR functions from being a support function to strategic function.

UNIT I CONTEXT OF SHRM**9**

SHRM - SHRM models - strategic HRM vs Traditional HRM - Barriers to Strategic HR- Adopting an Investment Perspective - Understanding and Measuring Human capital - Human side of corporate strategies - strategic work redesign - Strategic Capability - Bench Marking.

UNIT II HUMAN RESOURCE DEVELOPMENT**9**

Meaning – Strategic framework for HRM and HRD – Vision, Mission and Values – Importance – Challenges to Organisations – HRD Functions - Roles of HRD Professionals - HRD Needs Assessment - HRD practices – Measures of HRD performance – Links to HR, Strategy and Business Goals – HRD Program Implementation and Evaluation – Recent trends –HRD Audit.

UNIT III E-HRM**9**

e- Employee profile– e- selection and recruitment - Virtual learning and Orientation – e- training and development – e-learning strategies- e- Performance management - and Compensation design - Use of mobile applications in HR functions– Development and Implementation of HRIS – Designing HR portals – Issues in employee privacy – Employee surveys online.

UNIT IV CAREER & COMPETENCY DEVELOPMENT**9**

Career Concepts – Roles – Career stages – Career planning and Process – Career development Models– Career Motivation and Enrichment –Managing Career plateaus- Designing Effective Career Development Systems – Competencies and Career Management – Competency Mapping Models – Equity and Competency based Compensation.

UNIT V EMPLOYEE COACHING & COUNSELING**9**

Need for Coaching – Role of HR in coaching – Coaching and Performance – Skills for Effective Coaching – Coaching Effectiveness– Need for Counseling – Role of HR in Counseling - Components of Counseling Programs – Counseling Effectiveness – Employee Health and Welfare Programs.

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1: Understand the relationship of HR strategy with overall corporate strategy, the strategic role of specific HR systems.
- CO2: Appreciate SHRM in the context of changing forms of organisation and will have a better understanding of the tools and techniques used by organizations to meet current challenges.
- CO3: To be more sensitive to cross-cultural issues and understanding of international approaches to dealing with people in organisations. Students will look at HRM in a broader, comparative and international perspective to deal with complex issues and manifold risks.
- CO4: Providing an overview of the counselling and coaching processes and techniques. Developing alternative approach to dealing with problem situations in organisations.
- CO5: Understand the career development theories and models and gain necessary self-insight, skills and techniques to become effective HR managers

REFERENCES :

1. Randy L. Desimone, Jon M. Werner – David M. Mathis, Human Resource Development, Cengage Learning, 7th edition, 2016.
2. Jeffrey A Mello, Strategic Human Resource Management, Cengage Learning, 3rd edition, 2011.
3. Paul Boselie. Strategic Human Resource Management. Tata McGraw Hill. 2011
4. Robert L. Mathis and John H. Jackson, Human Resource Management, Cengage Learning, 2007.
5. Pulak Das. Strategic Human Resource Management- A Resource Driven Perspective- Cengage Learning 4th Indian Reprint- 2013.
6. Terresa Torres Coronas & Mario Arias Olivia. e-Human Resource Management- Managing Knowledge People- Idea Group Publishing, 2005.
7. Randall S Schuler and Susan E Jackson. Strategic Human Resource Management. Wiley Publications- 2007.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2	3	3	1	2	3	1	1	1
CO2	3	3	3	3	3	2	2	2	3	1	2	1
CO3	3	2	3	3	3	2	2	2	2	1	1	1
CO4	3	2	3	3	2	2	2	3	2	1	1	1
CO5	3	3	2	3	3	2	2	3	2	1	2	1

BA5030 INDUSTRIAL RELATIONS AND LABOUR LEGISLATIONS**L T P C****3 0 0 3****OBJECTIVES:**

- To explore contemporary knowledge and gain a conceptual understanding of industrial relations.
- To have a broad understanding of the legal principles governing the employment relationship at individual and collective level.

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UNIT I INDUSTRIAL RELATIONS 9

Concept, scope- objectives- Importance - Approaches to IR- Industrial relations system in India. Trade Unions Act,1926- trade union movement in India- objective -role - functions- procedure for registration of trade unions- Rights and responsibilities- problems- Employee relations in IT sector.

UNIT II INDUSTRIAL CONFLICTS AND LABOUR WELFARE 9

The Industrial Disputes Act, 1947-Disputes – Impact – Causes – Strikes – Prevention – Industrial Peace – Government Machinery – Conciliation – Arbitration – Adjudication. Labour welfare- statutory-Voluntary- welfare funds-welfare of unorganized labour

UNIT III LABOUR LEGISLATIONS-I 9

Origin and growth of labour legislation in India- Principles of labour legislations-Factories Act 1948- Minimum Wages Act, 1948- Payment of Wages Act, 1936- Payment of Bonus Act, 1965-

UNIT IV LABOUR LEGISLATIONS-II 9

The Industrial employment (standing orders) Act, 1946- The Apprentices act, 1961-The Equal Remuneration act, 1976- Payment of Gratuity act 1972- Employee compensation act in 2013

UNIT V LABOUR LEGISLATIONS-III 9

Employees' Provident fund and Miscellaneous provisions act, 1952- Employees' state insurance (ESI) Act, 1948- Maternity Benefit Act, 1961- Contract Labour Regulations and Abolition Act, 1970 -The Child Labour Prevention and Regulation Act, 1986.

TOTAL: 45 PERIODS

COURSE OUTCOMES:

The student gets to learn about

1. Industrial relations system and Trade unions
2. Industrial Disputes and labour welfare measures
3. Labour legislation introduction and legal provisions for factory workers, wages and Bonus
4. Legal provisions for equal remuneration, gratuity, compensation, industrial employment and Apprenticeship
5. Legal provisions for EPF, ESI, Maternity, contract labours, and child labour prevention

REFERENCES :

1. Mamoria C.B. and SathishMamoria, Dynamics of Industrial Relations, Himalaya Publishing House, New Delhi, 2016.
2. Kapoor N. D , Elements of Mercantile Law, Sultan Chand, 2014.
3. ArunMonappa, RanjeetNambudiri, PatturajaSelvaraj. Industrial relations &Labour Laws. Tata McGraw Hill. 2012
5. P.K. Padhi, Industrial Laws, PHI, 2017.
6. P.R.N Sinha, InduBala Sinha, Seema PriyardarshiniShekhar. Industrial Relations, Trade Unions and Labour Legislation. Pearson. 2017
7. Tax Mann, Labour Laws, 2018.
8. Srivastava, Industrial Relations and Labour laws, Vikas, 2015.
9. P.N.Singh, Neeraj Kumar. Employee relations Management. Pearson. 2011.
10. Ratna Sen, Industrial Relations in India, Shifting Paradigms, Macmillan India Ltd., New Delhi, 2007.
11. C.S.VenkataRatnam, Globalisation and Labour Management Relations, Response Books, 2007.

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CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	3	2	1	3	3	1	2	1	3	2	2	1
II	3	3	3	3	3	3	2	2	2	1	2	1
III	3	3	3	3	3	2	1	1	2	1	2	1
IV	3	3	2	3	3	1	1	2	3	3	3	2
V	3	3	3	3	3	2	1	1	2	3	2	2

BA5031

SOCIAL PSYCHOLOGY

L T P C
3 0 0 3

OBJECTIVE:

To study how people view themselves and others, how people interact, influence and act when they are a part of a group..

UNIT I INTRODUCTION TO SOCIAL PSYCHOLOGY 6

Social Psychology – Origin and development – Social behavior and social thought – Applications in society and business.

UNIT II PERCEIVING AND UNDERSTANDING OTHERS 9

Social perception – Nonverbal communication – Attribution – Impression formation and impression management.

UNIT III COGNITION IN THE SOCIAL WORLD 10

Self, Self Esteem & Social Comparison , self-efficacy, narcissism ,Social cognition – Schemas – Heuristics – Errors – Attitudes & Behaviour – Persuasion – Cognitive dissonance

UNIT IV INTERPERSONAL RELATIONS 10

Social identity – Prejudice – Discrimination – Aggression – Interpersonal attraction and Relationships.

UNIT V APPLIED SOCIAL PSYCHOLOGY 10

Social Influence – Conformity – Compliance – Social Influence - Prosocial behaviour – Groups – Social issues, Stress, personal beliefs and health

TOTAL: 45 PERIODS

COURSE OUTCOMES:

The student gets to learn about

1. the fundamentals of social psychology
2. Social perception and impression management
3. Social cognition and comparison
4. Social Identity and interpersonal attraction and relations
5. Social influence and the application of social psychology

REFERENCES :

1. Baron, Byrne and Brascombe, Social Psychology, 13th Edition, Pearson, 2014.
2. David G. Myers, Social Psychology, Tata McGraw Hill, 11th Edition,.
3. Baron and Byrne, Social Psychology, 8th Edition, PHI, 2006.
4. Howitt. Social Psychology. Tata McGraw Hill
5. Rohall et al. Social Psychology. PHI Learning. 2nd edition
6. Attitudes, Personality and Behaviour. Ajzer. Tata McGraw Hill
7. Hollway. Social Psychology Matters. Tata McGraw Hill.

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CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	1	1	1	3	2	1	3	3	2	1	3	1
II	2	2	3	3	2	2	3	3	3	2	3	1
III	2	2	3	3	3	1	3	3	2	1	3	2
IV	3	2	2	3	3	2	3	3	3	1	3	1
V	3	3	2	3	3	3	3	3	2	1	3	1

BA5032 ORGANIZATIONAL DESIGN, CHANGE AND DEVELOPMENT L T P C
3 0 0 3

OBJECTIVES:

- To help the students to gain knowledge about the concepts of change management and to acquire the skills required to manage any change effectively
- To understand the concept and techniques of OD and to enable the skills for the application of OD in organizations.

UNIT I ORGANIZATIONAL DESIGN 9

Organizational Design – Determinants – Components – Basic Challenges of design – Differentiation, Integration, Centralization, Decentralization, Standardization, Mutual adjustment -Mechanistic and Organic Structures- Technological and Environmental Impacts on Design-Importance of Design – Success and Failures in design.

UNIT II ORGANIZATIONAL CHANGE 9

Meaning, Nature, Forces for change- change agents- Change process-Types and forms of change- Models of change- Resistance to change – individual factors – organizational factors – techniques to overcome change- Change programs –job redesign.

UNIT III ORGANIZATIONAL DEVELOPMENT 9

Introduction- evolution- basic values and assumptions- foundations of OD- Process of OD- managing the phases of OD- Organizational diagnosis-Process-stages- Techniques- Questionnaire, interview, workshop, task-force- collecting, analyzing- feedback of diagnostic information.

UNIT IV OD INTERVENTION 9

Human process interventions-Individual, group and inter-group human relations- structure and technological interventions- strategy interventions – sensitivity training – survey feedback, process consultation – team building – inter-group development.

UNIT V ORGANIZATIONAL EVOLUTION AND SUSTENANCE 9

Organizational life cycle – Models of transformation – Models of Organizational Decision making – Organizational Learning – Innovation, Intrapreneurship and Creativity-HR implications.

TOTAL: 45 PERIODS

COURSE OUTCOMES:

The student gets to learn about

1. The fundamentals of organizational design and structure
2. Change process, types, and models of change in organizations
3. The fundamentals of organizational development
4. Organizational development Interventions
5. Organizational evolution and sustenance

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COURSE OUTCOMES :

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

- CO1. The learners will gain knowledge about appropriate style of managerial behavior.
- CO2. The learners will acquaint with different streams of managerial effectiveness.
- CO3. The learners shall be competent in the current practices of managerial effectiveness.
- CO4. The learners can solve environmental issues in managerial effectiveness
- CO5. The learners are effective in developing a winning edge in creativity and innovation.

REFERENCES:

1. Peter Drucker, Management, Harper Row, 2005.
2. Milkovich and Newman, Compensation, McGraw-Hill International, 2005.
3. Blanchard and Thacker, Effective Training Systems, Strategies and Practices Pearson 2006.
4. Dubrin, Leadership, Research Findings, Practices & Skills, Biztantra, 2008.
5. Joe Tidd, John Bessant, Keith Pavitt, Managing Innovation, Wiley 3rd edition, 2006.
6. T.V.Rao, Appraising and Developing Managerial Performance, Excel Books, 2002.
7. R.M.Omkar, Personality Development and Career Management, S.Chand, 1st edition, 2008.
8. Richard L.Daft, Leadership, Cengage, 1st Indian Reprint 2008.

Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	2	3	2	1	3	3	2	2	3	2	2	2
II	3	2	2	3	2	3	2	2	1	2	2	3
III	2	1	2	2	3	2	3	3	2	3	2	2
IV	2	2	1	2	3	2	2	3	2	2	3	2
V	3	2	3	2	2	1	3	2	2	3	3	3

BA5034

NEGOTIATION AND CONFLICT MANAGEMENT

L T P C
3 0 0 3

OBJECTIVES:

- To develop an understanding of the nature and strategies of negotiation.
- To understand conflict and strategies to resolve the conflict.

UNIT I FUNDAMENTALS OF NEGOTIATION

9

Nature, Characteristics of negotiation- Dimensions of Negotiation-Structure- Norms & values- Types of Negotiation- Negotiation process- Perception and Preparation-Communication and Influence-Techniques of Negotiation- Issues in negotiation.

UNIT II NEGOTIATION STRATEGIES

9

strategy and planning for negotiation- Strategy and Tactics for distributive bargaining - Integrative negotiation-Negotiation power- source of power- Cross culture Negotiation-Ethics in negotiation.

UNIT III INTRODUCTION TO CONFLICT MANAGEMENT

9

Understanding conflict, components, perspective of conflict- Types of conflict- Models of conflict (Process & Structural)-Sources of conflict- Contingency approach, conflict management process, conflict domain, conflict trends, conflict distribution, conflict mapping and tracking-conflict & performance - Advantages & Disadvantages of Conflict.

UNIT IV MANAGING INTERPERSONAL, GROUP AND ORGANIZATIONAL CONFLICT

9

Individual difference- Personalities & abilities- Interpersonal conflict- Group conflict- Organizational conflict- Dealing with difficult subordinates & boss-Technique to resolve team conflict- organizational conflict strategies.

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UNIT V CONFLICT RESOLUTION AND COST**9**

Conflict resolution models-framework model-classical ideas- new developments in conflict resolution-Environmental conflict resolution-gender and conflict resolution-Assessing the cost of workplace conflict.

TOTAL: 45 PERIODS**COURSE OUTCOMES:**

The student gets to learn about

1. The fundamentals of Negotiation, Types, process and techniques
2. Strategies and tactics in Negotiation
3. The basics of Conflict management, models, approaches and process
4. Managing interpersonal, group and organizational conflict
5. Conflict resolution models and cost of workplace conflict

REFERENCES:

1. Negotiation - Lewicki, Saunders, Barry, TMGH, 2014
2. Corporate Conflict Management - concepts & skills by Eirene Rout, Nelson Omika, PHI, 2007
3. Negotiation- Communication for diverse settings- Michael Spangle, Sage Publication, 2008
4. Managing conflict and negotiation, B.D. Singh, 1st edition, Excel books, 2008.
5. Conflict Management: Practical guide to develop negotiation strategies, Barbara A Budjac Corvette, Pearson Prentice Hall, 2006, ISBN: 8174466428, 9788174466426
6. Managing Conflict in Organizations, M. Afzalur Rahim, 4th Edition, Transaction Publishers, 2011, ISBN 1412844258, 9781412844253.
7. Negotiation, Harvard Business Essentials, Harvard Business School Press, 2003
8. How to negotiate effectively, David Oliver, The Sunday Times, Kogan Page, 2010
9. Conflict Resolution Techniques by Subbulakshmi, ICFAI University press, 2005

CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	2	2	3	2	2	2	1	2	2	1	1	1
II	3	3	3	3	3	3	3	2	2	1	2	2
III	2	3	3	3	3	3	2	3	3	1	2	2
IV	3	3	3	3	3	3	2	3	3	1	2	2
V	3	3	2	3	3	2	2	2	3	2	2	2

PROGRESS THROUGH KNOWLEDGE

BA5035**REWARD AND COMPENSATION MANAGEMENT**

L T P C
3 0 0 3

OBJECTIVES :

- To impart skills in designing analyzing and restructuring reward management systems, policies and strategies.
- To understand the various dimensions of Compensation Management.

UNIT I INTRODUCTION**9**

Compensation - Definition - objectives- principles of compensation formulation- Compensation Design and strategy- theories of wage determination- Wage Structure -types of wages- wage boards- wage policy. Compensation decisions- compensation benchmarking- compensation trends and reward system in India.

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UNIT II EMPLOYEE COMPENSATION AND LABOUR MARKET 9

Macroeconomics of Labour markets- Unemployment and its impact on labour market- Neoclassical microeconomics of labour markets-models, supply and demand-economic model Implications on employee compensation- economic theories and employee compensation- trade -offs - valuation of employee compensation.

UNIT III MANAGING EMPLOYEE BENEFITS AND REWARDS 9

Nature and types of employee benefits- statutory employee benefits in India- Deferred compensation plan- Non-monetary benefits. Reward - Meaning, Elements, Types- Basic concepts of reward management - Designing reward system- Approaches to reward system- Difference between reward and compensation.

UNIT V PERFORMANCE RELATED COMPENSATION 9

Performance management system (PMS)-performance objectives - indicators- standards and metric -effective performance modeling-dimensions of performance- competency based pay. Team Compensation – Gain Sharing Incentive Plan – Enterprise Incentive Plan – Profit Sharing Plan- ESOPs .

UNIT IV EXECUTIVE AND SALES COMPENSATION PLAN 9

Executive Compensation – Components, Theories, Design- Relationship between Fixed and variable pay-Executive Incentive Programmes. Sale Compensation plan- design and administration- sales incentives and motivations. Compensation Management in Multi-National organisations.

TOTAL: 45 PERIODS

COURSE OUTCOMES:

The student gets to learn about

1. The basics of Compensation Management and Reward system, Theories and strategies
2. Macro and micro economics of labour market and employee compensation
3. Managing employee benefits and rewards
4. Performance related compensation
5. Executive and sales compensation plans, theories and design

REFERENCES:

1. Richard.I. Henderson: Compensation Management In A Knowledge Based World – Prentice Hall, 2007.
2. Richard Thrope& Gill Homen: Strategic Reward Systems- Prentice-Hall, 2000
3. Reward Management: A Handbook of salary administration by Armstrong, Michael and
4. Marlis, Kogan page business books, 2005
5. Thomas.P. Plannery, David.A. Hofrichter&Paul.E.Platten: People Performance & Pay – Free Press.
6. Michael Armstrong & Helen Murlis: Hand Book Of Reward Management – Crust Publishing House.
7. Joseph.J. Martocchio: Strategic Compensation – A Human Resource Management Approach – Prentice-Hall.
8. Edwarde.E.Lawler III: Rewarding Excellence (Pay Strategies for the New Economy) – Jossey-Bass.

CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	3	2	1	1	2	1	1	2	2	3	2	1
II	2	2	2	3	2	1	1	2	3	3	1	2
III	3	3	2	3	3	3	2	2	3	2	1	3
IV	3	2	2	3	3	3	1	3	2	3	1	3
V	3	2	1	3	3	2	1	2	3	3	2	2

OBJECTIVES :

- To enhance one's own self awareness and understand others.
- To explore one's own feelings and behavior.

UNIT I SELF AWARENESS AND MANAGEMENT 9

Personal Effectiveness- Definition -Emotional Intelligence - Understanding oneself- Importance self knowledge - Stress and EI- Competence and Personal Competency - Personal Competency Models- Learning- Importance of Ongoing Learning- Learning and Unlearning- Personal Change- Impression Formation and Impression Management.

UNIT II BUILDING TEAMS 9

Team Building methods and strategies - Leadership and Team Building - Nature of Power- Creating Effective work teams- Impact of Motivation and Delegation on Team Building - Participative Decision Making.

UNIT III COMMUNICATION 9

Interpersonal Communication - Strategies and Issues - Culture, Diversity and Communication - Communicating Within Teams, Organizations -Communicating Outside Organizations - Assertiveness - Persuasion - Strategies.

UNIT IV INFLUENCING OTHERS 9

Influence- Objectives - Methods of Influence - Individual responses to Influence - Exerting Influence- Common Influencing Problems and Solutions- Agression - Coping with Agression - Negotiations- Convincing People - Developing and Using Contacts

UNIT V TRANSCATIONAL ANALYSIS AND NLP 9

Concept of Self- Feeling Self- Thinking Self- Believing Self- Transcations- Transcational Analysis - Structural Analysis -TA and Self Awareness- Concept of strokes- Making Sense of Life- Therapeutic Enquiry- Assessing suitability and Implementation of TA as therapy- NLP Basics - Managing Self with the power of NLP: Life Planning, Personal Vision and Mission.

TOTAL: 45 PERIODS**COURSE OUTCOMES :**

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

- CO1. The learners can develop a better understanding of themselves and others.
- CO2. The learners can develop themselves to be a better person.
- CO3. The learners will gain knowledge about appropriate style of managerial communication.
- CO4. The learners will acquaint with the ability to influencing others
- CO5. The learners are competent in the process of transactional analysis and nlp.

REFERENCES :

1. Personal Effectiveness. 3rd Edition- CMI- Alexander Murdock and Carol N. Scutt, Routledge Publishing, 2003, 2011
2. Brilliant Personal Effectiveness. Douglas Miller, 2015, Pearson Education
3. An Introduction to Transactional Analysis: Helping People to Change, Phil Lapworth and Charlotte Sills, 2011, Sage Publications.
4. NLP: The Essential Guide to Neuro-Linguistic Programming, Tom Hoobyar, Tom Dotz, Susan Sanders, Harper Collins Publishers. 2013
5. The Seven Habits of highly effective people- Steven Covey, 2013, 25th Anniversary Edition, The Bath Press.

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Course Outcome	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	2	1	2	2	3	2	3	3	2	3	2	2
II	2	2	1	2	3	2	2	3	2	2	3	2
III	3	2	3	2	2	1	3	2	2	3	3	3
IV	2	3	2	1	3	3	2	2	3	2	2	2
V	3	2	2	3	2	3	2	2	1	2	2	3

BA5037 INTERNATIONAL HUMAN RESOURCES MANAGEMENT L T P C
3 0 0 3

OBJECTIVE :

- The course aims to provide students insights to HR practices followed in Global organizations.

UNIT I INTRODUCTION TO IHRM 9

Definition – Evolution of HRM- Importance of IHRM, Models of IHRM – Matching Model, Harvard Model, Contextual Model, 5p Model, European Model, IHRM policies, Standardization and Localization of HRM practices

UNIT II HRM STRATEGIES 10

Internationalization and world business – Strategic orientation, IHRM in cross border Mergers and Acquisitions, International Alliances – IHRM & Competitive advantage- Cultural context of IHRM

UNIT III RECRUITMENT AND SELECTION 6

International Managers staffing – Approaches to staffing – Role of Expatriates – Role of in-patriate – Role of Non expatriates- recruitment and selection methods- Current practices

UNIT IV TRAINING AND DEVELOPMENT, PERFORMANCE APPRAISAL 10

Expatriate training program, components, types, effectiveness measures, HCN training- Trends in international training and development – repatriation process and training. International performance Management methods – cultural issues in Performance Management

UNIT V INTERNATIONAL COMPENSATION 10

Components of international compensation- Approaches to international compensation – Challenges and choices -International Labor Standards – emerging Issues

TOTAL: 45 PERIODS

COURSE OUTCOMES:

The student gets to learn about

- 1.the basics of IHRM, models and practices
2. strategic orientation and cultural context towards IHRM
3. International practices on recruitment and selection
4. International perspectives on Training, development, performance appraisal
5. International practices on Compensation management

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REFERENCES :

1. Peter J Dowling & D E. Welch: International Human Resource Management, Cengage Learning 7th Edition IE.,2017
2. Monir H. Tayeb: International Human Resource Management,A Multinational Company Perspective Oxford University Press, IE
3. IbraizTarique, Dennis Briscoe&randall, International Human Resource Management- Policies and practices for Multinational Enterprises, Routledge, 5th edition
4. Anne- WilHarZing, Ashly Pinnington, International human Resource Management, 3rd edition, Sage Publication
5. P L Rao, International Human resource Management- Text and Cases, Excel Books
6. Christopher Brewster, Guy Vernon, Paul Sparrow, Elizabeth Houldsworth – International Human Resource Management, Kogan Page Publishers

CO	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
I	3	1	2	2	3	1	1	1	3	1	2	2
II	3	2	3	2	3	1	1	1	3	2	3	2
III	3	3	2	2	3	2	2	1	2	2	2	2
IV	3	2	2	2	3	2	2	2	3	3	2	1
V	3	2	3	3	3	2	2	2	3	3	1	2

BA5038

HUMAN RESOURCE ANALYTICS

L T P C
3 0 0 3

OBJECTIVES :

- To develop the ability of the learners to define and implement HR metrics that are aligned with the overall business strategy
- To know the different types of HR metrics and understand their respective impact and application
- To understand the impact and use of HR metrics and their connection with HR analytics
- To understand common workforce issues and resolving them using people analytics.

UNIT I INTRODUCTION TO HR ANALYTICS 9

HR analytics - People Analytics : Definition- context - stages of maturity - Human Capital in the Value Chain : impact on business. HR Analytics vs HR Metrics – HR metrics and KPIs.

UNIT II HR ANALYTICS I: RECRUITMENT 9

Recruitment Metrics : Fill-up ratio - Time to hire - Cost per hire - Early turnover - Employee referral hires - Agency hires - Lateral hires - Fulfillment ratio- Quality of hire- Recruitment to HR cost - Recruitment analysis.

UNIT III HR ANALYTICS II : TRAINING AND DEVELOPMENT 9

Training & Development Metrics : Percentage of employee trained- Internally and externally trained -Training hours and cost per employee - ROI -Optimising the ROI of HR Programs - Training and Development analysis.

UNIT IV HR ANALYTICS III : EMPLOYEE ENGAGEMENT AND CAREER PROGRESSION 9

Employee Engagement Metrics :Talent Retention - Retention index - Voluntary and involuntary turnover- Turnover by department , grades, performance, and service tenure - Internal hired index - Engagement Survey Analysis.
Career Progression Metrics : Promotion index - Rotation index - Career path index - Level wise succession readiness index.

UNIT V HR ANALYTICS IV: WORKFORCE DIVERSITY AND DEVELOPMENT 9

Workforce Diversity and Development Metrics : Employees per manager - Workforce age profiling - Workforce service profiling - Churnover index - Workforce diversity index - Gender mix - Differently abled index- Revenue per employee - Operating cost per employee - PBT per employee - HR cost per employee- HR budget variance - Compensation to HR cost.

TOTAL: 45 PERIODS

COURSE OUTCOMES :

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

- CO1. The learners will be conversant about HR metrics and ready to apply at work settings.
- CO2. The learners will be able to resolve HR issues using people analytics.
- CO3. The learners will gain knowledge about analytics of training and development.
- CO4. The learners will know about the analytics of employee engagement and career progression
- CO5. The learners are competent in the analytics of workforce diversity and development.

REFERENCES :

1. JacFitzenz , The New HR Analytics, AMACOM , 2010.
2. Edwards M. R., & Edwards K, Predictive HR Analytics: Mastering the HR Metric. London: Kogan Page.2016.
3. Human Resources kit for Dummies – 3 rd edition – Max Messmer, 2012
4. Dipak Kumar Bhattacharyya, HR Analytics ,Understanding Theories and Applications, SAGE Publications India ,2017.
5. Sesil, J. C. , Applying advanced analytics to HR management decisions: Methods for selection, developing incentives, and improving collaboration. Upper Saddle River, New Jersey: Pearson Education,2014.
6. Pease, G., & Beresford, B, Developing Human Capital: Using Analytics to Plan and Optimize Your Learning and Development Investments. Wiley ,2014.
7. Phillips, J., & Phillips, P.P, Making Human Capital Analytics Work: Measuring the ROI of Human Capital Processes and Outcomes. McGraw-Hill,2014.
8. HR Scorecard and Metrics, HBR, 2001.

BA5039

e – BUSINESS

L T P C
3 0 0 3

OBJECTIVE :

- To understand the practices and technology to start an online business.

UNIT I INTRODUCTION TO e-BUSINESS 8

e-business, e-business vs e-commerce, Economic forces – advantages – myths – e-business models, design, develop and manage e-business, Web 2.0 and Social Networking, Mobile Commerce, S-commerce

UNIT II TECHNOLOGY INFRASTRUCTURE 10

Internet and World Wide Web, internet protocols - FTP, intranet and extranet, information publishing technology- basics of web server hardware and software.

UNIT III BUSINESS APPLICATIONS 10

Consumer oriented e-business – e-tailing and models - Marketing on web – advertising, e-mail marketing, affiliated programs - e-CRM; online services, Business oriented e-business, e-governance, EDI on the internet, Delivery management system, Web Auctions, Virtual communities and Web portals – social media marketing

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UNIT IV e-BUSINESS PAYMENTS AND SECURITY 9
 E-payments - Characteristics of payment of systems, protocols, e-cash, e-cheque and Micro payment systems- internet security – cryptography – security protocols – network security.

UNIT V LEGAL AND PRIVACY ISSUES 8
 Legal, Ethics and privacy issues – Protection needs and methodology – consumer protection, cyber laws, contracts and warranties, Taxation and encryption policies.

TOTAL: 45 PERIODS

OUTCOMES :

- CO1: Ability to build and manage an e-business.
- CO2: Knowledge about Technology Infrastructure
- CO3: Understanding of customer oriented business applications
- CO4: Knowledge of e business payment protocols and security
- CO5: Understanding of ethical, legal , privacy issues and encryption policies

REFERENCES :

1. Harvey M.Deitel, Paul J.Deitel, Kate Steinbuhler, e-business and e-commerce for managers, Pearson, 2011.
2. Efraim Turban, Jae K. Lee, David King, Ting Peng Liang, Deborrah Turban, Electronic Commerce –A managerial perspective, Pearson Education Asia, 2010.
3. Parag Kulkarni, SunitaJahirabadkao, Pradeep Chande, e business, Oxford University Press, 2012.
4. Hentry Chan &el , E-Commerce – fundamentals and Applications, Wiley India Pvt Ltd, 2007.
5. Gary P. Schneider, Electronic commerce, Thomson course technology, Fourth annual edition, 2007
6. Bharat Bhasker, Electronic Commerce – Frame work technologies and Applications, 3rd Edition. Tata McGrawHill Publications, 2009
7. KamleshK.Bajaj and Debjani Nag, Ecommerce- the cutting edge of Business, Tata McGraw Hill Publications, 7th reprint, 2009.
8. Kalakota et al, Frontiers of Electronic Commerce, Addison Wesley, 2004
9. Micheal Papaloelon and Peter Robert, e-business, Wiley India, 2006.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3	2	3	2	3	3	1	2	2
CO2	3	2	1	3	3	2	2	3	2	2	1	1
CO3	3	3	2	3	3	2	2	3	2	1	2	1
CO4	3	3	2	3	3	2	1	3	2	1	1	2
CO5	3	3	2	2	3	1	1	3	2	1	2	1

BA5040 INTERNET OF THINGS L T P C 3 0 0 3

OBJECTIVES :

- To experiment the technical aspects of Internet of Things.
- To expose the application of Internet of Things.

UNIT I INTRODUCTION 9
 Introduction to Internet of Things - Physical Design of IoT - Logical Design of IoT - IoT Enabling Technologies - IoT Levels and Deployment Templates - Domain Specific to IoTs.

UNIT II IoT ARCHITECTURE 9
 ETSI, IETF, OGC architectures - IoT reference model - Domain model - information model - functional model - communication model - IoT reference architecture.

- UNIT III BUILDING IoT 9**
IoT Systems - Logical Design using Python - IoT Physical Devices and Endpoints: What is an IoT Device - Basic building blocks of an IoT device - Exemplary Device: Raspberry Pi - Programming Raspberry Pi with Python - Other IoT Devices.
- UNIT IV IoT DATA PLATFORM 9**
Data Analytics for IoT: Introduction - Apache Hadoop - Using Hadoop Map Reduce for Batch Data Analysis - Apache Oozie - Apache Spark - Tools for IoT - Introduction - Chef: Setting up Chef.
- UNIT V CASE STUDIES AND REAL-WORLD APPLICATIONS 9**
IoT Physical Servers & Cloud Offerings - Case Studies Illustrating IoT Design: Introduction - Home Automation – Smart Cities - Environment - Agriculture - Productivity Applications.

TOTAL : 45 PERIODS

OUTCOMES :

- CO1: Technical knowledge of Internet of Things.
- CO2: Ability to understand IoT Architecture
- CO3: Understanding of building blocks of IoT
- CO4: Deep insights about IoT Data Platform
- CO5: Knowledge of real world applications

REFERENCES :

1. ArshdeepBahga, Vijay Madiseti, - Internet of Things - Ahands-on approach, University Press, 2015
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), —Architecting the Internet of ThingsII, Springer, 2011.
3. Honbo Zhou, —The Internet of Things in the Cloud: A Middleware Perspectivell, CRC Press, 2012.
4. Jan Ho" ller, VlasiosTsiatsis , Catherine Mulligan, Stamatis , Karnouskos, Stefa
5. Avesand. David Boyle, "From Machine-to-Machine to the Internet of Things - Introduction to a New Age of Intelligence", Elsevier, 2014.
6. Olivier Hersent, David Boswarthick, Omar Elloumi , -The Internet of Things – Key applications and ProtocolsII, Wiley, 2012
7. Adrian McEwen and Hakim Cassimally, "Designing the Internet of Things", John Wiley & Sons, 2013.
8. CunoPfister, "Getting Started with the Internet of Things: Connecting Sensors and Microcontrollers to the Cloud", Maker Media, 2011.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	3	2	2	1	3	2	1	2	2
CO2	3	2	2	3	2	2	1	3	2	2	1	1
CO3	3	3	1	3	2	2	2	3	2	1	2	1
CO4	3	3	2	3	3	2	2	3	2	1	1	2
CO5	3	3	2	3	2	2	2	3	2	1	2	1

BA5041

CLOUD COMPUTING

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OBJECTIVES:

- To expose the students to the frontier areas of Cloud Computing
- To provide an in-depth and comprehensive knowledge of the Cloud Computing fundamental issues, technologies, applications and implementations.
- To shed light on the Security issues in Cloud Computing
- To introduce about the Cloud Standards.

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UNIT I HISTORY OF CLOUD COMPUTING 9

History of Centralized and Distributed Computing - Overview of Distributed Computing, Cluster computing, Grid computing. Technologies for Network based systems- System models for Distributed and cloud computing- Software environments for distributed systems and clouds.

UNIT II INTRODUCTION TO CLOUD COMPUTING 9

Introduction to Cloud Computing- Cloud issues and challenges - Properties - Characteristics - Service models, Deployment models. Cloud resources: Network and API - Virtual and Physical computational resources - Data-storage. Virtualization concepts - Types of Virtualization- Introduction to Various Hypervisors - High Availability (HA)/Disaster Recovery (DR) using Virtualization, Moving VMs .

UNIT III CLOUD COMPUTING APPLICATIONS 9

Cloud Programming and Software Environments – Parallel and Distributed Programming paradigms – Overview on Amazon AWS and Microsoft Azure – Overview on Google App Engine – Emerging Cloud software Environment.

UNIT IV CLOUD SECURITY 9

Cloud Access: authentication, authorization and accounting - Cloud Provenance and meta-data - Cloud Reliability and fault-tolerance - Cloud Security, privacy, policy and compliance- Cloud federation, interoperability and standards.

UNIT V GOVERNANCE AND THE FUTURE OF CLOUD 9

Organizational Readiness and Change Management in the Cloud Age, Legal Issues in Cloud Computing, Achieving Production Readiness for Cloud Services, How Cloud Will Change Operating Systems, Future of Cloud TV & Cloud-Based Smart Devices, Cloud and Mobile, Home-Based Cloud Computing.

TOTAL: 45 PERIODS

OUTCOMES:

- CO1 Students will get to know the history of cloud computing.
- CO2 Identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.
- CO3 Provide the appropriate cloud computing solutions and recommendations according to the applications used.
- CO4 Understand the core issues of cloud computing such as security, privacy.
- CO5 Students will get the idea about the future of cloud computing.

REFERENCES :

1. Kai Hwang, Geoffrey C. Fox and Jack J. Dongarra, Distributed and cloud computing from Parallel Processing to the Internet of Things, Morgan Kaufmann, Elsevier, 2012
2. Rajkumar Buyya, James Broberg and Andrzej Goscinski, Cloud Computing – Principles and Paradigms, John Wiley & Sons, 2011
3. Kris Jamsa, Cloud Computing, Jones & Bartlett Learning, 2013
4. Kumar Saurabh, Cloud Computing – Insights into new era infrastructure, Wiley India, 2nd Edition, 2012
5. Barrie Sosinsky, “ Cloud Computing Bible” John Wiley & Sons, 2011
6. Tim Mather, Subra Kumaraswamy, and Shahed Latif, Cloud Security and Privacy An Enterprise Perspective on Risks and Compliance, O'Reilly 2009

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	2	1		2		3	3		2	1
CO2	3	1	2	1	1	3	2	3	2	1	2	1
CO3	3	2	2	2	1	3	3	3	3	2	1	1
CO4	3	1	3	2	1	3	3	2	2	1	1	1
CO5	1	1	2	1	3	3	2	3	2	1	2	1

OBJECTIVES :

- To exhibit the theoretical aspects of Enterprise Resource Planning.
- To provide practical implication on ERP Suite implementation.

UNIT I INTRODUCTION**8**

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - warehouse management.

UNIT II ERP SOLUTIONS AND FUNCTIONAL MODULES**10**

Overview of ERP software solutions, BPR, Project management, Functional modules- Organisational data, master data and document flow.

UNIT III ERP IMPLEMENTATION**10**

Planning Evaluation and selection of ERP systems - Implementation life cycle - ERP implementation, Methodology and Frame work- Training – Data Migration. People Organization in implementation-Consultants, Vendors and Employees.

UNIT IV POST IMPLEMENTATION**8**

Maintenance of ERP- Organizational and Industrial impact; Success and Failure factors of ERP Implementation.

UNIT V EMERGING TRENDS ON ERP**9**

Extended ERP systems and ERP add-ons -CRM, SCM, Business analytics - Future trends in ERP systems-web enabled, Wireless technologies, cloud computing and Augmented reality.

TOTAL: 45 PERIODS**OUTCOMES :**

- CO1: Knowledge of risk and benefits associated with Enterprise Resource Planning.
 CO2: Knowledge or ERP solutions and functional modules
 CO3: Exposure to the implementation environment
 CO4: Understanding of post implementational impact and maintenance of ERP
 CO5: Knowledge of emerging trends on ERP

REFERENCES :

1. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2008.
2. Simha R. Magal , Jeffrey Word, Integrated Business processes with ERP systems, John Wiley & Sons, 2012.
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
5. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2009
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, Prentice Hall of India, 2006.
7. Summer, ERP, Pearson Education, 2008.
- 8.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	1	3	2	2	1	3	2	2	2	2
CO2	3	3	2	3	3	2	2	3	1	2	1	1
CO3	3	3	1	3	2	2	2	3	2	1	2	1
CO4	3	3	3	3	2	2	1	2	2	2	1	2
CO5	3	3	1	3	2	2	1	3	2	1	2	1

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OBJECTIVES:

- To create an understanding on methodologies, tools, techniques, metrics, quality and risk issues in software project management.
- To provide the knowledge and necessary skills for taking up quality related task in Software projects.

UNIT I SPM CONCEPTS 9
 Definition – components of SPM – challenges and opportunities – tools and techniques – managing human resource and technical resource – costing and pricing of projects – training and development – project management techniques.

UNIT II SOFTWARE MEASUREMENTS 9
 Monitoring & measurement of SW development – cost, size and time metrics – methods and tools for metrics – issues of metrics in multiple projects.

UNIT III SOFTWARE QUALITY AND RISK ISSUES 9
 Quality in SW development – quality assurance – quality standards and certifications. The risk issues in SW development and implementation – identification of risks – resolving and avoiding risks – tools and methods for identifying risk management.

UNIT IV QUALITY PLANNING 9
 Planning Concepts- Integrating Business and Quality Planning- Prerequisites to Quality Planning- The Planning Process. Define, Build, Implement and Improve Processes: Process Management Concepts- Process Management Processes.

UNIT V QUALITY CONTROL PRACTICES 9
 Testing Concepts- Developing Testing Methodologies- Verification and Validation Methods- Software Change Control- Defect Management. Metrics and Measurement: Measurement Concepts- Measurement in Software- Variation and Process Capability- Risk Management- Implementing a Measurement Program.

TOTAL: 45 PERIODS

OUTCOMES:

- CO1 Apply project management concepts and techniques to a project.
 CO2 Explain project management in terms of the software development process.
 CO3 Understand the risk issues in software development.
 CO4 Apply the concepts in preparing the quality plan & documents.
 CO5 Assess the quality of software product.

REFERENCES :

1. Roger S. Pressman, Software Engineering A Practitioners Approach, McGraw Hill International Edition, New Delhi, 7th Edition, 2010
2. Richard H. Thayer (Edited), Software Engineering Project Management, IEEE, John Wiley & Sons, 2nd edition, 2000
3. Bob Hughes, Mike Cotterell and Rajib Mall, Software Project Management, McGraw Hill Publishing Company, 6th Edition, 2017
4. Alan Gillies, Software Quality – Theory and Management, Thomson Learning, 3rd edition, 2011.
5. Stephen Kan, Metrics and Models in Software Quality Engineering, Pearson Education Asia, 8th Impression 2009.

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OBJECTIVES :

- To know how to derive meaning form huge volume of data and information
- To understand how knowledge discovering process is used in business decision making.

UNIT I INTRODUCTION 9

Data mining, Text mining, Web mining, Spatial mining, Process mining, Data ware house and datamarts.

UNIT II DATA MINING PROCESS 9

Datamining process – KDD, CRISP-DM, SEMMA and Domain-Specific, Classification and Prediction performance measures -RSME, MAD, MAP, MAPE, Confusion matrix, Receiver Operating Characteristic curve & AUC; Validation Techniques - hold-out, k-fold cross-validation, LOOCV, random subsampling, and bootstrapping.

UNIT III PREDICTION TECHNIQUES 9

Data visualization, Time series – ARIMA, Winter Holts, Vector Autoregressive analysis, Multivariate regression analysis.

UNIT IV CLASSIFICATION AND CLUSTERING TECHNIQUES 9

Classification- Decision trees, k nearest neighbour, Logistic regression, Discriminant analysis; Clustering; Market basket analysis;

UNIT V MACHINE LEARNING AND AI 9

Genetic algorithms, Neural network, Fuzzy logic, Support Vector Machine, Optimization techniques – Ant Colony, Particle Swarm, DEA

TOTAL: 45 PERIODS**OUTCOMES:**

CO1 Learn to apply various data mining techniques into various areas of different domains.

CO2 Be able to interact competently on the topic of data mining for business intelligence.

Know the basics of data mining processes, algorithms, & systems well enough to interact with CTOs, expert data miners, consultants, etc.

CO3 Apply various prediction techniques.

CO4 Learn about supervised and unsupervised learning technique.

CO5 Develop and implement a basic trainable neural network (or) a fuzzy logic system to design and manufacturing.

REFERENCES :

1. Jaiwei Ham and Micheline Kamber, Data Mining concepts and techniques, Kauffmann Publishers 2006
2. Efraim Turban, Ramesh Sharda, Jay E. Aronson and David King, Business Intelligence, Prentice Hall, 2008.
3. W.H.Inmon, Building the Data Warehouse, fourth edition Wiley India pvt. Ltd. 2005.
4. Ralph Kimball and Richard Merz, The data warehouse toolkit, John Wiley, 3rd edition, 2013.
5. Michel Berry and Gordon Linoff, Mastering Data mining, John Wiley and Sons Inc, 2nd Edition, 2011
6. Michel Berry and Gordon Linoff, Data mining techniques for Marketing, Sales and Customer support, John Wiley, 2011
7. G. K. Gupta, Introduction to Data mining with Case Studies, Prentice hall of India, 2011
8. Giudici, Applied Data mining – Statistical Methods for Business and Industry, John Wiley, 2009
9. Elizabeth Vitt, Michael Luckevich, Stacia Misner, Business Intelligence, Microsoft, 2011
10. Michalewicz Z., Schmidt M. Michalewicz M and Chiriack C, Adaptive Business Intelligence, Springer – Verlag, 2007

11. GalitShmueli, Nitin R. Patel and Peter C. Bruce, Data Mining for Business Intelligence – Concepts, Techniques and Applications Wiley, India, 2010.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	2	1	1	2	2	3	3	1	2	3
CO2	3	1	1	2	1	3	2	3	2	1	2	2
CO3	3	1	1	1	1	2	2	3	3	1	2	2
CO4	2	1	1	2	2	3	3	3	2	1	1	2
CO5	3	1	2	2	2	3	3	1	3	1	2	1

BA5075

BIG DATA ANALYTICS

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OBJECTIVES:

- To understand the computational approaches to big data analytics
- To understand the various search methods and visualization techniques
- To learn to use various techniques for mining data stream
- To understand the applications using Map Reduce Concepts.

UNIT I INTRODUCTION TO BIG DATA 9

Introduction to Big Data Platform – Challenges of Conventional Systems - Intelligent data analysis – Nature of Data - Analytic Processes and Tools - Analysis vs Reporting.

UNIT II MINING DATA STREAMS 9

Introduction To Streams Concepts – Stream Data Model and Architecture - Stream Computing - Sampling Data in a Stream – Filtering Streams – Counting Distinct Elements in a Stream – Estimating Moments – Counting Oneness in a Window – Decaying Window - Real time Analytics Platform(RTAP) Applications - Case Studies - Real Time Sentiment Analysis- Stock Market Predictions.

UNIT III HADOOP 9

History of Hadoop- the Hadoop Distributed File System – Components of Hadoop Analysing the Data with Hadoop- Scaling Out- Hadoop Streaming- Design of HDFS-Java interfaces to HDFS Basics- Developing a Map Reduce Application-How Map Reduce Works-Anatomy of a Map Reduce Job run-Failures-Job Scheduling-Shuffle and Sort – Task execution - Map Reduce Types and Formats- Map Reduce Features Hadoop environment.

UNIT IV FRAMEWORKS 9

Applications on Big Data Using Pig and Hive – Data processing operators in Pig – Hive services – HiveQL – Querying Data in Hive - fundamentals of HBase and ZooKeeper - IBM Info Sphere BigInsights and Streams.

UNIT V VISUALIZATION TECHNIQUES 9

Predictive Analytics- Simple linear regression- Multiple linear regression- Interpretation of regression coefficients. Visualizations - Visual data analysis techniques- interaction techniques - Systems and applications.

TOTAL : 45 PERIODS

OUTCOME :

- Appreciate the computational softwares and techniques for handling big data in business applications.
- Learn the concepts, data model and architecture of streams.
- Understand core technical concepts related to Business Intelligence , Big Data Analytics along with Hadoop Architecture.
- Learn the various application in Big Data.
- Understand the visualization techniques.

REFERENCES :

1. Frank J Ohlhorst, "Big Data Analytics: Turning Big Data into Big Money", Wiley and SAS Business Series, 2013.
2. Colleen Mccue, "Data Mining and Predictive Analysis: Intelligence Gathering and Crime Analysis", Elsevier, Second Edition, 2015.
3. Michael Berthold, David J. Hand, "Intelligent Data Analysis", Springer, Second Edition, 2007.
4. AnandRajaraman and Jeffrey David Ullman, "Mining of Massive Datasets", Cambridge University Press, 2014.
5. Bill Franks, "Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with Advanced Analytics", Wiley and SAS Business Series, 2012.
6. Paul Zikopoulos, Chris Eaton "Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data", McGraw Hill, 2012.
7. Paul Zikopoulos, Dirk de Roos, Krishnan Parasuraman, Thomas Deutsch , James Giles, David Corrigan, "Harness the Power of Big data - The big data platform", McGraw Hill, McGraw-Hill Osborne Media, 2012.
8. Glenn J. Myatt, "Making Sense of Data I: A Practical Guide to Exploratory Data Analysis and Data Mining", John Wiley & Sons, Second Edition, 2014.
9. Pete Warden, "Big Data Glossary", O'Reilly, 2011.
10. Jiawei Han, Micheline Kamber "Data Mining Concepts and Techniques", Elsevier, Third Edition, 2011.
11. Tom White "Hadoop: The Definitive Guide" Third Edition, O'reilly Media, 2012
12. William Stallings, "Cryptography and Network security: Principles and Practices", Pearson/PHI, 5th Edition, 2010.
13. Mark Talabis, Robert McPherson, I Miyamoto and Jason Martin, "Information Security Analytics: Finding Security Insights, Patterns, and Anomalies in Big Data", Syngress Media, U.S., 2014

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	1	1	3	3	3	2	1	2	3
CO2	2	1	1	1	1	2	3	3	2	1	2	3
CO3	1	2	3	1	2	3	1	2	3	1	2	3
CO4	3	3	2	2	1	1	1	3	2	1	2	2
CO5	3	2	1	1	1	3	2	3	2	1	2	3



BA5076

DEEP LEARNING AND ARTIFICIAL INTELLIGENCE

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OBJECTIVES :

- To expose various algorithms related to Deep Learning and Artificial Intelligence.
- To prepare students to apply suitable algorithm for the specified applications.

UNIT I DEEP NETWORKS 9

Deep Networks: Modern Practices: Deep Forward Networks: Example: Learning XOR - Gradient-Based Learning - Hidden Units - Architecture Design - Regularization for Deep Learning.

UNIT II MODELS 9

Optimization for Training Deep Models: How Learning Differs from Pure Optimization - Challenges in Neural Network Optimization - Basic Algorithms - Parameter Initialization Strategies - Algorithms with Adaptive Learning Rates - Approximate Second-Order Methods - Optimization Strategies and Meta-Algorithms.

UNIT III INTELLIGENT SYSTEMS 9

Introduction to Artificial Intelligence: Intelligent Systems - Foundations of AI - Applications - Tic-Tac-Toe Game Playing - Problem Solving: State-Space Search and Control Strategies: Introduction - General Problem Solving - Exhaustive Searches - Heuristic Search Techniques.

UNIT IV KNOWLEDGE REPRESENTATION 9

Advanced Problem-Solving Paradigm: Planning: Introduction - Types of Planning Systems - Knowledge Representation: Introduction - Approaches to Knowledge Representation - Knowledge Representation using Semantic Network - Knowledge Representation using Frames.

UNIT V APPLICATIONS 9

Expert Systems and Applications: Blackboard Systems - Truth Maintenance Systems - Applications of Expert Systems - Machine-Learning Paradigms: Machine-Learning Systems - Supervised and Unsupervised Learnings.

TOTAL : 45 PERIODS

OUTCOMES :

- CO1: Knowledge of Algorithms of Deep Learning & Artificial Intelligence.
- CO2: Knowledge of applying Algorithm to specified applications.
- CO3: Ability to understand intelligent systems and Heuristic Search Techniques
- CO4: Understanding of Knowledge Representation, Semantic Networks and Frames
- CO5: Knowledge Of Expert systems, applications and Machine learning

REFERENCES :

1. Ian Goodfellow, YoshuaBengio, Aaron Courville, "Deep Learning", MIT Press, 2016.
2. Li Deng and Dong Yu, "Deep Learning Methods and Applications", Foundations and Trends in Signal Processing.
3. YoshuaBengio, "Learning Deep Architectures for AI", Foundations and Trends in Machine Learning.
4. SarojKaushik, "Artificial Intelligence", Cengage Learning India Pvt. Ltd.
5. Deepak Khemani, "A First Course in Artificial Intelligence", McGraw Hill Education(India) Private Limited, NewDelhi.
6. Elaine Rich, Kevin Night, Shivashankar B Nair, "Artificial Intelligence" Third Edition, McGraw Hill, 2008.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	2	1	3	2	1	2	2
CO2	3	3	3	3	3	3	2	3	2	2	1	1
CO3	3	3	2	3	3	2	2	3	2	1	2	1
CO4	3	3	2	3	3	2	1	3	2	1	1	2
CO5	3	2	1	3	2	2	1	3	2	1	2	1

BA5077

R PROGRAMMING

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OBJECTIVE:

- To study the fundamentals of R programming to apply in quantitative analysis.

UNIT I GETTING STARTED WITH R 9

Installing R - The R environment - R packages - Basics of R - Data Structures - Reading data into R - Graphics in R

UNIT II FUNCTIONS AND STATEMENTS 9

Writing R functions - Control Statements (if and else, switch, ifelse, compound tests) - Loops in R (for, while, controlling loops) - Applications using the functions and loops.

UNIT III DATA MANIPULATION AND ANALYSIS 9

Group manipulation - Data Reshaping - Manipulating Strings - Basic Statistics using R (Summaries, Correlation, t-tests, ANOVA)

UNIT IV LINEAR MODELS USING R 9

Linear Models - Simple and Multiple regression, GLM - Logit Regression, Model diagnostics - Residuals, Cross validation, Boot strapping.

UNIT V NON-LINEAR MODELS, TIME SERIES AND CLUSTERING USING R 9

Nonlinear Models - Non-Linear least square, Splines, Generalised Additive Models, Decision trees, Random forests. Time Series - Autoregressive moving average, VAR, GARCH. Clustering - K means, PAM and Hierarchical Clustering.

STOTAL: 45 PERIODS**OUTCOMES:**

CO1: Explore R language fundamentals, including basic syntax, variables, and types.

CO2: How to create functions and use control flow.

CO3: Work with data in R.

CO4: Understand the liner models using R.

CO5: The student will learn to use R programming to solve decision models.

REFERENCES :

1. Jared P.L., R for Everyone - Advanced Analytics and Graphics, Addison Wesley Data and Analytics series, 2015.
2. SandipRakshit, R Programming for Beginners, McGraw Hill Education, 2017

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	1	1	3	3	3	2	1	2	3
CO2	1	2	1	2	1	3	2	3	3	1	2	3
CO3	1	3	1	2	1	3	3	3	2	1	2	2
CO4	1	2	1	1	1	3	2	3	2	1	3	3
CO5	3	3	1	1	1	3	2	2	3	1	2	2

BA5078**PYTHON PROGRAMMING****L T P C
3 0 0 3****OBJECTIVES :**

- To explore the programming skills in the Python environment.
- To employ the programming in the Applications.

UNIT I INTRODUCTION 9

Introduction to Computer Systems – Computer Hardware – Computer Software – Programming Languages – Algorithmic Problem Solving – Building Blocks of a Program – Fundamentals of Python Programming – Syntax and Styles: Data types – Literals – Variable – Operators and Expressions.

UNIT II DATA COLLECTIONS AND LANGUAGE COMPONENT 9

Control Flow: If, While, For, Break, Continue, Pass Statements – Entry Controlled Loop – Exit Controlled Loop – Counter Controlled Loop – Condition Controlled Loop – Nested Loops – Sample Programs – Sequences– Lists – Tuples: Need of Tuple - Sequence Unpacking - Methods.

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UNIT III FUNCTIONS AND MODULES 9

Dictionaries: Making a Dictionary – Basic Operations – Dictionary Operations – Sets – Iterators and Generators – Functions: Introduction – Defining Functions – Calling Functions – Passing Arguments – Keyword Arguments – Default Arguments – Required Arguments – Variable –length Arguments – Return Statement – Nesting of Passing Arguments – Anonymous Functions – Recursive Function – Scope of Local and Global Variable – Sample Programs – Modules.

UNIT IV OBJECT AND CLASSES 9

Object Oriented Programming Principles: Class Statement – Class Body – Objects – Class Methods – Self Variable – Class Properties and Instance Properties – Static Method – Data Hiding – Deleting an Object – Constructor – Method Overriding – Inheritance – Packages – Strings and Regular Expressions

UNIT V I/O, ERROR HANDLING AND THREADS 9

Files and Directory Access: Files and Streams – Opening a File – Reading/Writing Operations on a File – Other File Operations – Iterating through Files – Splitting Words – Serialization and De-serialization – Hash files – Directory Access – Errors and Exceptions – Multithreading: Introduction to Thread – Differences between Process and Thread – Threading Module – Thread Synchronization.

TOTAL : 45 PERIODS**OUTCOMES :**

- CO1 Knowledge of programming in Python Environment.
- CO2 Ability to apply Programming in the application specified.
- CO3 Ability to apply programming as modules
- CO4 Ability to develop program as objects and instances
- CO5 Knowledge to handle errors

REFERENCES :

1. ChSatyanarayana, M Radhika Mani, B N Jagadesh, “Python Programming”, Universities Press (India) Private Ltd 2018.
2. Kenneth A. Lambert, B.L. Juneja, M. Arunachalam, G. Balakrishnan, “Problem Solving and Python Programming”, Cengage Learning India Pvt. Ltd.
3. Allen B. Downey, “Think Python: How to Think Like a Computer Scientist”, II edition, Updated for Python 3, Shroff/O’Reilly Publishers, 2016 (<http://greenteapress.com/wp/thinkpython/>)
4. Robert Sedgewick, Kevin Wayne, Robert Dondero, —Introduction to Programming in Python: An Inter-disciplinary Approach, Pearson India Education Services Pvt. Ltd., 2016.
5. Timothy A. Budd, —Exploring PythonII, Mc-Graw Hill Education (India) Private Ltd., 2015.
6. Kenneth A. Lambert, —Fundamentals of Python: First ProgramsII, CENGAGE Learning, 2012.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	3	1	2	2	3	1	1	2	2
CO2	3	2	1	3	2	2	2	3	2	2	1	1
CO3	3	3	1	2	1	2	2	3	2	1	2	1
CO4	3	3	2	1	3	1	2	2	1	1	1	2
CO5	3	3	1	1	2	2	1	3	2	1	2	1

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OBJECTIVES :

- To understand Blockchain and its main application.
- Students will learn how this system works.

UNIT I INTRODUCTION 9

Distributed Database, Two General Problem, Byzantine General problem and Fault Tolerance, Hadoop Distributed File System, Distributed Hash Table, ASIC resistance, Turing Complete. Cryptography: Hash function, Digital Signature - ECDSA, Memory Hard Algorithm, Zero Knowledge Proof.

UNIT II BLOCKCHAIN & APPLICATIONS 9

Introduction to Blockchain, Gartner's Hype Curve and Evolution of Blockchain Technology, Blockchain Need & Genesis, Key Characteristics of Blockchain, Blockchain Structure, Blockchain types and Network, Mining and Consensus, How Blockchain Works, Bitcoin Whitepaper, Understanding Bitcoin, Components of a Block, Forks: soft & hard forks, Ummer blocks, Different forks from Bitcoin, Wallets, Transactions, Public & Private keys, Blockchain Applications : Internet of Things, Medical Record Management System, Do-main Name Service and future of Blockchain.

UNIT III CRYPTOCURRENCY 9

History, Distributed Ledger, Bitcoin protocols - Mining strategy and rewards, Ethereum - Construction, DAO, Smart Contract, GHOST, Vulnerability, Attacks, Sidechain, Namecoin. Cryptocurrency Regulation: Stakeholders, Roots of Bitcoin, Legal Aspects - Cryptocurrency Exchange, Black Market and Global Economy.

UNIT IV ETHEREU 9

Need of Ethereum, Ethereum Foundation, Ethereum Whitepaper, How Ethereum Works, Ethereum network, Ethereum Virtual Machine, Transactions and Types, Mining & Consensus, Smart Contracts.

UNIT V HYPERLEDGER FABRIC 9

Hyperledger, Hyperledger Fabric, Comparison between Fabric & Other Technologies, Fabric Architecture, Components of Hyperledger Fabric, Advantages of Hyperledger Fabric Blockchain, How Hyperledger Fabric Works.

TOTAL: 45 PERIODS**OUTCOMES:**

- CO1 To get an idea about history of Blockchain.
- CO2 Understand key features, different types of platforms & languages of blockchain technology.
- CO3 Students will be familiar with cryptocurrency concepts.
- CO4 Understand the design principles of ethereum.
- CO5 Learn about hyperledger fabric model and its architecture.

REFERENCES :

1. Imran Bashir, Mastering Blockchain, Packt Publishing, March 2017
2. DebajaniMohanty, BlockChain : From Concept to Execution, BPB Publications, 2nd edition, 2018
3. Artemis Caro, Blockchain: Bitcoin, Ethereum&Blockchain: The Beginners Guide to Understanding the Technology Behind Bitcoin & Cryptocurrency, 2017
4. Andreas M. Antonopoulos, Gavin Wood, Mastering Ethereum: Building Smart Contracts and DApps, O'REILLY, 2018
5. Nitin Gaur, Luc Desrosiers, Venkatraman Ramakrishna, Petr Novotny, Dr. Salman A. Baset and Anthony O'Dowd, Hands-on Blockchain with Hyperledger, Packt Publishing, 2018.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1		1		3	2	3	2		1	2
CO2	3	2	3	1	1	3	2	3	2	1	1	2
CO3	2	1	1			3	2	3	3	1	1	2
CO4	2	1	1			3	2	3	3	1	1	2
CO5	2	1	1			3	2	3	3	1	1	2

BA5045

SOCIAL MEDIA WEB ANALYTICS

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OBJECTIVE:

- To showcase the opportunities that exist today to leverage the power of the web and social media

UNIT I INTRODUCTION 9

Evolution of online communities - History and Evolution of Social Media- Social Media vs. traditional media - Social Media Audience and Goals for using Social Media - Understanding Social Media: Strong and weak ties – Influencers - How ideas travel – Viralness - Social theory and social media - technological determinism in popular discourse on social media technologies.

UNIT II COMMUNITY BUILDING AND MANAGEMENT 9

Science of Social Media - Keys to Community Building - Promoting Social Media Pages- Linking Social Media Accounts-The Viral Impact of Social Media-Digital PR-Encourage Positive Chatter in Social Media - Identity in social media: formation of identities, communities, activist movements, and consumer markets - Social Media as business.

UNIT III SOCIAL MEDIA POLICIES AND MEASUREMENTS 9

Social Media Policies-Etiquette, Privacy- ethical problems posed by emerging social media technologies - The road ahead in social media- The Basics of Tracking Social Media - social media analytics- Insights Gained From Social Media- Customized Campaign Performance Reports - Observations of social media use.

UNIT IV WEB ANALYTICS 9

Web Analytics - Present and Future, Data Collection - Importance and Options, Overview of Qualitative Analysis, Business Analysis, KPI and Planning, Critical Components of a Successful Web Analytics Strategy, Web Analytics Fundamentals, Concepts, Proposals & Reports, Web Data Analysis.

UNIT V SEARCH ANALYTICS 9

Search engine optimization (SEO), non-linear media consumption, user engagement, user-generated content, web traffic analysis, navigation, usability, eye tracking, online security, online ethics, content management system, data visualization, RSS feeds, Mobile platforms, User centered design, Understanding search behaviors.

TOTAL: 45 PERIODS

OUTCOMES

- CO1 The students will be able to enhance the social media skills.
- CO2 The students will be able to develop a mass communication strategy and guide campaigns.
- CO3 To get an idea of social media policies.
- CO4 Understand the fundamentals and concepts of web analytics.
- CO5 How to effectively use the resulting insights to support website design decisions, campaign optimisation, search analytics, etc.

Attested

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REFERENCES :

1. K. M. Shrivastava, Social Media in Business and Governance, Sterling Publishers Private Limited, 2013
2. Christian Fuchs, Social Media a critical introduction, SAGE Publications Ltd, 2014
3. Bittu Kumar, Social Networking, V & S Publishers, 2013
4. Avinash Kaushik, Web Analytics - An Hour a Day, Wiley Publishing, 2007
5. ric T. Peterson, Web Analytics Demystified, Celilo Group Media and Café Press, 2004
6. TakeshiMoriguchi, Web Analytics Consultant Official Textbook, 7th Edition, 2016

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	2	1	1	3	1	2	3	1	3	1
CO2	3	1	2	1	2	3	2	2	3	1	3	1
CO3	3	1	1	1	1	2	3	2	2		3	
CO4	1	1		1		3	3	3	2		1	2
CO5	3	1	1	1	1	3	2	3	2	2	3	2

BA5046

STOCHASTIC MODELING

L T P C
3 0 0 3

OBJECTIVES:

- To learn the applications of stochastic modelling.
- To understand the techniques of stochastic modelling.

UNIT I INTRODUCTION TO STOCHASTIC PROCESSES 9

Basics of probability- random variables and distributions -sequence of random variables; Stochastic process-Definition, classification, Simple stochastic processes

UNIT II DISCRETE-TIME MARKOV CHAINS 9

Introduction, Definition and Transition Probability Matrix, Chapman-Kolmogorov Equations, Classification of States and Limiting Distributions: Limiting and Stationary Distributions, Limiting Distributions, Ergodicity and stationary distributions-Time Reversible Markov Chain, Application of Irreducible Markov chains in Queueing Models-Reducible Markov Chains

UNIT III CONTINUOUS-TIME MARKOV CHAINS 9

Definition, Kolmogorov Differential Equation and, Infinitesimal Generator Matrix, Limiting and Stationary Distributions, Birth Death Processes, Poisson processes: M/M/1 Queueing model, Simple Markovian Queueing Models: Applications of CTMC- Queueing networks, Communication systems, Stochastic Petri Nets

UNIT IV BROWNIAN MOTION 9

Definition and Properties, Processes Derived from Brownian Motion, Stochastic Differential Equation: Martingales: Conditional Expectation and filtration, Definition and simple examples,

UNIT V RENEWAL PROCESSES 9

Renewal Function and Equation, Generalized Renewal Processes, and Renewal Limit Theorems, Markov Renewal and Markov Regenerative Processes, Non Markovian Queues, Application of Markov Regenerative Processes: Branching Processes, Stationary and Autoregressive Processes.

TOTAL: 45 PERIODS

OUTCOMES:

- CO1: Knowledge of using stochastic modeling for business decision making.
- CO2: Understanding of discrete – Time Markov chains
- CO3: Knowledge of continuous – Time Markov chains
- CO4: Ability to understand Brownian Motion
- CO5: Understanding of Renewal Processes and applications

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REFERENCES :

1. J Medhi, Stochastic Processes, 3rd edition, New Age International Publishers, 2009
2. Liliana Blanco Castaneda, Viswanathan Arunachalam, Selvamuthu Dharmaraja, Introduction to Probability and Stochastic Processes with Applications, Wiley, 2012.
3. Kishor S. Trivedi, Probability and Statistics with Reliability, Queuing, and Computer Science Applications, 2nd Edition, Wiley, 2002.
4. Introduction to Probability Models, Sheldon M. Ross, Academic Press, tenth edition, 2009.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	2	1	3	2	1	2	2
CO2	3	3	2	3	2	3	2	3	2	2	1	1
CO3	3	3	2	2	2	3	2	3	2	1	2	1
CO4	3	3	2	3	2	1	2	3	2	2	1	2
CO5	3	3	2	3	2	2	1	3	2	1	2	1

BA5047

TIME SERIES ANALYSIS

L T P C
3 0 0 3

OBJECTIVE:

- It familiarizes the learners and researchers to the theory and practice of time series analysis.

UNIT I UNIVARIATE STATIONARY TIME-SERIES MODELS 9

Introduction to stochastic process, stationary processes, Wold representation theorem, autocovariance functions, autocorrelation and partial autocorrelation, auto regressive and moving average models, conditions for stationary and invertible process, Box-Jenkins approach, forecasting.

UNIT II UNIVARIATE NONSTATIONARY PROCESSES 9

Nonstationary process, deterministic and stochastic trends, Integrated process and random walk, random walk with drift, Unit root process-, test for unit root- Dicky Fuller tests, , ARIMA process. Fractional integrated process.

UNIT III MODELING VOLATILITY CLUSTERING 9

Volatility-Meaning and measurement, Volatility clustering, Econometric models of volatility, ARCH model, GARCH model and its various extensions, testing for ARCH/GARCH effects.

UNIT IV MULTIVARIATE STATIONARY AND NON-STATIONARY PROCESSES 9

Vector autoregressive model, Granger causality, impulse response function, variance decomposition.

UNIT V MULTIVARIATE NON-STATIONARY PROCESSES 9

Introduction to cointegration, testing for cointegration: Single-equation approaches: Engle Granger method, Johansen test for cointegration, Vector error correction model.

TOTAL: 45 PERIODS

OUTCOME:

- CO1: Ability to understand the techniques of using univariate Time series models for decision making.
- CO2: Knowledge of using Univariate Nonstationary processes
- CO3: Understanding of Volatility Clustering
- CO4: Knowledge of Multivariate stationary Processes
- CO5: Knowledge of Multivariate Non-Stationary Processes

Attested


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REFERENCES:

1. Brooks, C., Introductory Econometrics for Finance, 3rd Edition, Cambridge University Press, 2014.
2. Enders, W., Applied Econometric Time Series, second edition, John Wiley and Sons, 2006.
3. Hamilton, J. D., Time Series Analysis, Princeton University Press, 1994.
4. Johnston J. and DiNardo, J. Econometric Methods. 4th Ed. McGraw-Hill 1997.
5. Maddala G.S. and In-Moo Kim, Unit Roots, Cointegration, and Structural Change, 1998.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CO3	3	3	3	2	2	3	2	3	2	1	2	1
CO4	3	3	2	3	2	1	2	3	2	2	1	2
CO5	3	3	2	3	2	2	1	3	2	2	2	1

BA5048**MULTIVARIATE DATA ANALYSIS****L T P C**
3 0 0 3**OBJECTIVE:**

- To know various multivariate data analysis techniques for business research.

UNIT I INTRODUCTION 9

Introduction – Basic concepts – Uni-variate, Bi-variate and Multi-variate techniques – Types of multivariate techniques – Classification of multivariate techniques – Guidelines for multivariate analysis and interpretation – Approaches to multivariate model building.

UNIT II PREPARING FOR MULTIVARIATE ANALYSIS 9

Introduction – Conceptualization of research problem – Identification of technique - Examination of variables and data – Measurement of variables and collection of data – Measurement of errors – Statistical significance of errors. Missing data – Approaches for dealing with missing data – Testing the assumptions of multivariate analysis – Incorporating non-metric data with dummy variables.

UNIT III MULTIPLE LINEAR REGRESSION ANALYSIS, FACTOR ANALYSIS 9

Multiple Linear Regression Analysis – Introduction – Basic concepts – Multiple linear regression model – Least square estimation – Inferences from the estimated regression function – Validation of the model. Factor Analysis: Definition – OBJECTIVE – Approaches to factor analysis – methods of estimation – Factor rotation – Factor scores - Sum of variance explained – interpretation of results.

UNIT IV LATENT VARIABLE TECHNIQUES 9

Confirmatory Factor Analysis, Structural equation modeling, Mediation models, Moderation models, Conditional processes, longitudinal studies, latent growth model, Bayesian inference

UNIT V ADVANCED MULTIVARIATE TECHNIQUES 9

Multiple Discriminant Analysis, Logistic Regression, Cluster Analysis, Conjoint Analysis, multidimensional scaling.

TOTAL: 45 PERIODS*Attested**W. J.*

OUTCOMES :

1. Demonstrate a sophisticated understanding of the concepts and methods; know the exact scopes and possible limitations of each method; and show capability of using multivariate techniques to provide constructive guidance in decision making.
2. Use advanced techniques to conduct thorough and insightful analysis, and interpret the results correctly with detailed and useful information.
3. Show substantial understanding of the real problems; conduct deep analysis using correct methods; and draw reasonable conclusions with sufficient explanation and elaboration.
4. Write an insightful and well-organized report for a real-world case study, including thoughtful and convincing details.
5. Make better business decisions by using advanced techniques in data analytics.

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1. Joseph F Hair, Rolph E Anderson, Ronald L. Tatham & William C. Black, Multivariate Data Analysis, Pearson Education, New Delhi, 2005.
2. Barbara G. Tabachnick, Linda S. Fidell, Using Multivariate Statistics, 6th Edition, Pearson, 2012.
3. Richard A Johnson and Dean W. Wichern, Applied Multivariate Statistical Analysis, Prentice Hall, New Delhi, 2005.
4. David R Anderson, Dennis J Seveency, and Thomas A Williams, Statistics for Business and Economics, Thompson, Singapore, 2002

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CO3	3	3	3	3	3	2	2	2	2	1	1	3
CO4	3	2	2	2	2	1	2	2	2	1	1	3
CO5	3	3	1	3	3	2	2	2	2	1	1	3

PROGRESS THROUGH KNOWLEDGE

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