PROGRAM BOOKLET

BBA

(Academic Session: 2021-2022)

School of Management & Commerce

Manav Rachna University

Vision

To educate students in frontier areas of knowledge enabling them to take up challenges as ethical and responsible global citizens

Mission

· **To impart outcome based holistic education**
· **To disseminate education in frontier areas**
· **To produce globally competitive, ethical and socially responsible human resources**
· **To produce human resources sensitive to issues of Environment and Sustainable Development**
· **To develop Environment and Sustainable development as a thrust area of research and development.**

Quality Policy

To continuously learn from the best practices, study role models and develop transparent procedures for empowerment of stakeholders.

Strategic Objectives

· **To facilitate, enhance & promote innovation in curriculum design and delivery and have Outcome-oriented Learning Culture.**
· **To promote Research Environment and Management Practices.**
· **To enhance the quality of the student learning experience.**
· **To provide Resources and Infrastructure for Academic Excellence.**

DEPARTMENT OF MANAGEMENT & COMMERCE

Vision

The Department of Management and Commerce aims at becoming a centre of learning in the area of management and

inter-disciplinary areas such as law, technology and education in order to create industry ready human resources.

Mission

To foster creation and development of industry ready workforce with the assistance of dedicated teaching faculty in sync with global standards. This will help future ready human resources to achieve excellence at work.

BBA PROGRAM

Programme Outcomes (POs).

PO1: Domain Knowledge of Business Enviornment- students shall apply knowledge of management theories, principles, practices & skills in emerging business environment.

PO2: Integrity, Ethic & professional Conduct: Students shall demonstrate ethical behaviour and professional integrity in their conduct to stive for truth, fairness, humility and honesty in professional life.

PO3: Critical Thinking & Problem Solving Ability: Students shall apply critical thinking skills to design problem solving startegies across management areas and implement innovative solutions.

PO4: Analytical & Decisons making ability: students shall access business environment using techniques of data analytics and other decision support tools to analyize and evaluate possible alternatives to complex business situations.

PO5: Research Aptitude & Inquiry: Students shall exhibit resrach acumen and research aptitude to provide innovative solutions in the different areas of management for the benefit of industry, academia and society at large.

PO6 -Multicultural Competence & Global Outlook : Students shall demonstrate competence in cross cultural enviornment, work in diverse groups in areas like health care ,supply chain, operations, finance etc and emerge as responsible global citizens.

PO7: Leadership readiness & Behaviourial Skills: students shall demonstrate leadership skills and work effectively with diverse teams through collaborative learning to deal with VUCA world.

PO8: Effective business communication & Social networking - Students shall be able to engage effectively, develop interpersonal relationship through their ability to listen, read, write ,interact, influence & negotiate in complex business situations.

PO9: Social Networking Skills & emotional intelligence: Students shall be able to acquire social and emotional skillsto work effectively with diverse groups in multiuclutural environment.

P10: Creativity, Empathy & community Engagement:Students shall demonstrate ability to identify with other or understand others perspectives, innovate or perform tasks in a better manner for the well being of the society

PO11: Environment & Sustainability: students shall analyze the implications of mangerial decisons in the context of enviornmental, social and corpoarte governance(ESG) in creating sustainable businesses

PO12: Information /Digital literacy: Students shall demonstarte ability to access, evaluate and use ICT in a variety of work situations and access relevant information sources for analysis of data.

Programme Specific Outcomes (PSOs)

PSO 1: Employability & Entrepreneurship: Students shall define their career aspirations and work towards achieveing the same by engaging in developing appropriate skills, mindset and competencies in their chosen profession/ fields of learning (corpoarte career, startup, family buisness, higher education etc)

PSO2: Specialized knowlegde & skills: Students will be able to demonstrate the acquistion of comprehensive & procedural knowledge for carrying out professional work/tasks in the specialized field and generate solutions in challenging environment.

			SEMESTER - 1							
	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
1	CSW104B	COMPUTER INFORMATION SYSTEM	CSE	HARD	CORE	0	0	3	3	1.5
2	MCH 106B	BUSINESS STATISTICS	DMC	HARD	CORE	3	0	0	3	3
3	EDH 146	BUSINESS COMMUNICATION – I	EDU	SOFT	CORE	3	0	0	3	3
4	MCH 105B	MARKETING MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
5	MCH121B	MANAGEMENT PRINCIPLES AND ORGANIZATIONAL BEHAVIOUR	DMC	HARD	CORE	3	0	0	3	3
	ELECTIVE									

		FINANCE AND ACCOUNTS								
6	MCH109B	FINANCIAL ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
7	MCH102B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
		Entrepreneurship & Family Business Specialization								
8	MCH 108B	ENTREPRENEURSHIP: THEORY AND PRACTICES	DMC	HARD	ELECTIVE	3	0	0	3	3
9	MCH125B	CREATIVITY & INNOVATION IN ENTREPRENEURSHIP	DMC	HARD	ELECTIVE	3	0	0	3	3
10	MCH103B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
11	MCH102B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
		Health Care Management Specialization								
12	MCH 110B	INTRODUCTION TO HEALTH CARE MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
13	MCH103B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
14	MCH102B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
		Operations Management Specialization								
15	MCH111B	PRINCIPLES OF MANUFACTURING	DMC	HARD	ELECTIVE	3	0	0	3	3
16	MCH103B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
17	MCH102B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3

		Business Analytics Specialization								
18	MCH129 B	INTRODUCTION TO BUSINESS ANALYTICS	DMC	HARD	ELECTIVE	3	0	0	3	3
19	MCH130 B	BASICS OF DATA MANAGEMENT WITH R & PYTHON	DMC	HARD	ELECTIVE	2	0	2	4	3
20	MCH218 B	MANAGERIAL ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
21	MCH103 B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
	COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

					SEMESTER - 2 CORE					
	SUBJECT CODES	SUBJECT NAME	OFFE RING DEPA RTME NT	*COURSE NATURE (Hard/So ft/ Worksho p/ NTCC)	COURSE TYPE (Core/Electi ve / University Compulsory)	L	T	P	NO. OF CONTA CT HOURS PER WEEK	NO. OF CRE DIT S
22	MCH11 3B	MACRO ECONOMICS	DMC	HARD	CORE	3	0	0	3	3
23	MCH11 4B	HUMAN RESOURCE MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
24	MCH11 5B	FINANCIAL MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
25	CSW105 B	ADVANCED EXCEL	CST	WORKS HOP	CORE	0	0	3	3	1.5
26	CDO101 B	PROFESSIONAL DEVELOPMENT PROGRAMME II	CDC	SOFT	UC	1	0	1	2	0

				ELECTIVE							

				FINANCE AND ACCOUNTS							
29	MCH122 B	COST ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3	
30	EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3	
27	MCH21 3 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2	

				Entrepreneurship & Family Business Specialization							
31	MCH12 3B	FUNDAMENTALS OF DESIGN THINKING & VENTURE CREATION	DMC	HARD	ELECTIVE	3	0	0	3	3	
32	MCH12 4B	INTRODUCTION TO FAMILY BUSINESS MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3	
33	EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3	
27	MCH21 3 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2	

				Health Care Management Specialization							
34	EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3	
35	MCH11 9B	FINANCING & BUSINESS DEVELOPMENT OF HOSPITALS	DMC	HARD	ELECTIVE	3	0	0	3	3	
36	MCH12 6B	HEALTHCARE COMMUNICATION	DMC	HARD	ELECTIVE	3	0	0	3	3	

#	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
37	MCH127B	HEALTHCARE ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
27	MCH213 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Operations Management

#	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
38	MCH117B	FUNDAMENTALS OF LOGISTICS	ME	HARD	ELECTIVE	3	0	0	3	3
27	MCH213 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Business Analytics Specialization

#	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
39	EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3
40	MCH131 B	Research Techniques	DMC	HARD	ELECTIVE	3	0	0	3	3
41	MCH132 B	Descriptive Analytics	DMC	HARD	ELECTIVE	2	0	2	4	3
28	MCH121 B	SUMMER TRAINING (TO BE EVALUATED IN III SEM)	DMC	SOFT	CORE	0	0	4	4	2

COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT

SEMESTER - 3

#	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
42	MCH201B	BUSINESS LAW	DMC	HARD	CORE	3	0	0	3	3

#	Code	Course	Dept	Type	Category	L	T	P	Total	Credits
43	ECH212B	MANAGEMENT INFORMATION SYSTEMS	ECE	HARD	CORE	2	0	2	4	3
44	MCH217B	RESEARCH METHODOLOGY	DMC	HARD	CORE	3	0	0	3	3
45	MCH203B	OPERATIONS MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
46	FLS101, 102,103	FOREIGN LANGUAGE	MRV FL	SOFT	UC	2	0	0	2	0
47	CHH137	ENVIRONMENTAL SCIENCES	CHEM DEPT	HARD	UC	4	0	0	4	4

ELECTIVE

FINANCE AND ACCOUNTS

#	Code	Course	Dept	Type	Category	L	T	P	Total	Credits
48	MCH234B	FINANCIAL SERVICES	DMC	HARD	ELECTIVE	3	0	0	3	3
49	MCH239B	MANAGEMENT ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
50	MCH205B	INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3

Entrepreneurship & Family Business Specialization

#	Code	Course	Dept	Type	Category	L	T	P	Total	Credits
51	MCH241B	FAMILY BUSINESS GOVERNANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
52	MCH242B	BUSINESS MODELLING	DMC	HARD	ELECTIVE	3	0	0	3	3

Health Care Management Specialization

#	Code	Course	Dept	Type	Category	L	T	P	Total	Credits
53	MCH210B	CLINICAL SERVICES	DMC	HARD	ELECTIVE	3	0	0	3	3
54	MCH211B	PLANNING AND DESIGN OF HOSPITALS	DMC	HARD	ELECTIVE	3	0	0	3	3

	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
55	MCH237B	EPIDEMIOLOGY	DMC	HARD	ELECTIVE	3	0	0	3	3
		Operations Management								
56	MCH208B	TOTAL QUALITY MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
57	MCH209B	WAREHOUSING MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
		Business Analytics Specialization								
58	MCH 244B	Python Programming	DMC	HARD	ELECTIVE	3	0	0	3	3
59	MCH245B	**Structured Query Language (SQL)**	CSE	HARD	ELECTIVE	2	0	2	4	3
		COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT								
		SEMESTER - 4								
	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
60	MCH218B	SERVICES MARKETING	DMC	HARD	CORE	3	0	0	3	3
61	MCH215B	SUPPLY CHAIN MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
62	MCH236B	CSR And Sustainable Development	DMC	HARD	CORE	3	0	0	**3**	3
		ELECTIVE								
		FINANCE AND ACCOUNTS								

#	Code	Course Name	Dept	Type	Category	L	T	P	C	Cr
63	MCH219B	MANAGEMENT OF BANKING AND FINANCIAL INSTITUTIONS	DMC	HARD	ELECTIVE	3	0	0	3	3
64	MCH235B	CORPORATE ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
65	MCH240B	DIGITAL FINANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
66	MCH216B	PERFORMANCE AND COMPENSATION MANAGEMENT SYSTEMS	DMC	HARD	ELECTIVE	3	0	0	3	3
67	CSH216B	RELATIONAL DATABASE MANAGEMENT SYSTEMS	ECE	HARD	ELECTIVE	2	0	2	4	3
68	MCH221B	SUMMER INTERNSHIP	DMC	SOFT	CORE	0	0	8	8	4

Entrepreneurship & Family Business Specialization

#	Code	Course Name	Dept	Type	Category	L	T	P	C	Cr
69	MCH222B	MANAGING ENTREPRENEURIAL GROWTH AND STRATEGY	DMC	HARD	ELECTIVE	3	0	0	3	3
70	MCH238B	APPLIED ENTREPRENEURSHIP PROGRAM	DMC	SOFT	Elective	1	0	2	3	3
71	MCH225B	APPLIED ENTREPRENEURSHIP PROJECT	DMC	NTCC	Elective	0	0	12	12	6

Health Care Management Specialization

#	Code	Course Name	Dept	Type	Category	L	T	P	C	Cr
72	MCH226B	MATERIAL & INVENTORY MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
73	MCH227B	HEALTHCARE INFORMATION SYSTEM	DMC	HARD	ELECTIVE	3	0	0	3	3

	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
74	MCH228B	MANAGEMENT OF MEDICATION	DMC	HARD	ELECTIVE	3	0	0	3	3
75	MCH229B	HEALTHCARE & HRM	DMC	HARD	ELECTIVE	3	0	0	3	3
76	MCH243B	Healthcare Industry Project	DMC	HARD	CORE	0	0	12	12	6
77	MCH231B	PROJECT MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
78	MCH232B	FREIGHT TRANSPORT MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
79	MCH233B	APPLIED OPERATIONS MANAGEMENT PROJECT	DMC	NTCC	ELECTIVE	0	0	12	12	6

Business Analytics Specialization										
80	MCH246B	Operation Research	DMC	HARD	ELECTIVE	3	0	0	3	3
81	MCH247B	SAS & Tableau	DMC	HARD	ELECTIVE	0	0	4	4	2
82	MCH216B	PERFORMANCE AND COMPENSATION MANAGEMENT SYSTEMS	DMC	HARD	ELECTIVE	3	0	0	3	3

COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT

SEMESTER - 5

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS

83	CSW351B	Website Designing	CST	Workshop	CORE	0	0	3	3	1.5
84	MCH302B	INTERNATIONAL BUSINESS	DMC	HARD	CORE	3	0	0	3	3
85	MCH303B	STRATEGIC MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
86	CDS305B	PROFESSIONAL DEVELOPMENT PROGRAMME V	CDC	SOFT	UC	1	0	1	2	0
		ELECTIVE								
		FINANCE AND ACCOUNTS								
87	MCH337B	COMPANY LAW	DMC	HARD	ELECTIVES	3	0	0	3	3
88	MCH304B	FINANCIAL DERIVATIVES	DMC	HARD	ELECTIVES	3	0	0	3	3
89	MCH305B	BUSINESS TAXATION	DMC	HARD	ELECTIVES	3	0	0	3	3
90	MCH306B	MERGERS AND ACQUISITIONS	DMC	HARD	ELECTIVES	3	0	0	3	3
101	EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
		Entrepreneurship & Family Business Specialization								
91	MCH338B	NEW AGE ENTREPRENEURSHIP	DMC	HARD	ELECTIVE	3	0	0	3	3
92	MCH339B	INTERNATIONAL FAMILY BUSINESS MODELS	DMC	HARD	ELECTIVE	3	0	0	3	3

10 1	EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2

Health Care Management Specialization

93	MCH31 0B	HEALTH CARE INSURANCE & MANAGEMENT CARE	DMC	HARD	ELECTIVE	3	0	0	3	3
94	MCH31 1B	QUALITY ASSURANCE IN HEALTH CARE	DMC	HARD	ELECTIVE	3	0	0	3	3
95	MCH31 2B	LEGAL & ETHICAL ISSUES IN HEALTH CARE	DMC	HARD	ELECTIVE	3	0	0	3	3
10 1	EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2

Operations Management

96	MCH31 3B	LOGISTICS AND INTERNATIONAL SUPPLY CHAIN MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
97	MCH31 4B	PURCHASING AND INVENTORY MANAGEMENT	ME	HARD	ELECTIVE	3	0	0	3	3
98	MCH31 5B	SERVICE OPERATIONS MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3

	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
101	EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2

			Business Analytics Specialization							
99	MCH340B	HR ANALYTICS	DMC	HARD	ELECTIVE	2	0	2	4	3
100	MCH341B	Social Media Analytics	DMC	HARD	ELECTIVE	2	0	2	4	3
101	EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2

COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT

SEMESTER - 6

	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
102	MCH316B	E-COMMERCE	DMC	HARD	CORE	3	0	0	3	3
103	MCH317B	DIGITAL MARKETING	DMC	HARD	CORE	3	0	0	3	3

104	MCH318B	BUSINESS ANALYTICS	DMC	HARD	CORE	3	0	0	3	3
105	CSW331B	GOOGLE SUITES	CST	Workshop	CORE	0	0	3	3	1.5

FINANCE AND ACCOUNTS

106	MCH320B	BEHAVIOURAL FINANCE	DMC	HARD	ELECTIVES	3	0	0	3	3
107	MCH335B	RISK MANAGEMENT IN BANKING SECTOR	DMC	HARD	ELECTIVES	3	0	0	3	3
108	MCH336B	FINANCIAL MODELING	DMC	HARD	ELECTIVES	3	0	0	3	3

Entrepreneurship & Family Business Specialization

109	MCH322B	STRATEGIES AND PRACTICES OF FAMILY OWNED ENTERPRISES	DMC	HARD	ELECTIVE	3	0	0	3	3
110	MCH323B	COPYRIGHT, PATENTS AND LAWS OF IPR	DMC	HARD	ELECTIVE	3	0	0	3	3
111	MCH324B	ENTREPRENEURIAL FINANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
112	MCH325B	APPLIED ENTREPRENEURSHIP PROJECT (EFB)	DMC	NTCC	ELECTIVE	0	0	16	16	8

Health Care Management Specialization

113	MCH327B	PUBLIC HEALTH	DMC	HARD	ELECTIVE	3	0	0	3	3

114	MCH 329B	GLOBAL HEALTHCARE SCENARIO,	DMC	HARD	ELECTIVE	3	0	0	3	3
11 5	MCH 330B	FINAL INTERNSHIP REPORT	DMC	NTCC	ELECTIVE	0	0	16	16	8
Operations Management										
116	MCH331B	INTRODUCTION TO SHIPPING	DMC	HARD	ELECTIVE	3	0	0	3	3
11 7	MCH332B	MULTIMODAL TRANSPORTATION	DMC	HARD	ELECTIVE	3	0	0	3	3
118	MCH333B	TRANSPORTATION AND DISTRIBUTION MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
11 9	MCH334B	APPLIED OPERATIONS MANEGEMENT PROJECT	DMC	NTCC	ELECTIVE	0	0	16	16	8
Business Analytics Specialization										
120	MCH342B	Machine Learning & AI	DMC	ELECTIVE	CORE	2	0	2	4	3
12 1	MCH343B	Supply Chain Analytics	DMC	ELECTIVE	ELECTIVE	2	0	2	4	3
122	MCH344B	Applied Project (Marketing, HR or Social Media analytics Based/Big Data or Digial Marketing	DMC	ELECTIVE	ELECTIVE	0	0	12	12	6
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT										

Total Credits Scheme

S. No.	Semester	Contact Hours	Credits
1	I (FAA/EFB/HCM/OM/BA)	21-28	20-26
2	II (FAA/EFB/HCM/OM/BA)	20-23	17-20
	Summer Training (Post II Sem)	0	2
3	III (FAA/EFB/HCM/OM/BA)	19-28	18-25
4	IV (FAA/EFB/HCM/OM/BA)	16-25	15-24
	Summer Training (Post IV Sem) FAA, BA	0	4
	EFB	0	6

5	V (FAA/EFB/HCM/OM/BA)	20-26	16-22
6	VI (FAA/EFB/HCM/OM/BA)	18-24	18-24
9	Summer Training (Post 6th Sem)		
	Range	114-154	104-141 (excluding summer training)

BBA Semester-I

	SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
					SEMESTER - 1					
	CSW104B	COMPUTER INFORMATION SYSTEM	CSE	HARD	CORE	0	0	3	3	1.5
	MCH 106B	BUSINESS STATISTICS	DMC	HARD	CORE	3	0	0	3	3
	EDH 146	BUSINESS COMMUNICATION – I	EDU	SOFT	CORE	3	0	0	3	3
	MCH 105B	MARKETING MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3

MCH121 B	MANAGEMENT PRINCIPLES AND ORGANIZATIONAL BEHAVIOUR	DMC	HARD	CORE	3	0	0	3	3
ELECTIVE									
FINANCE AND ACCOUNTS									
MCH109 B	FINANCIAL ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH102 B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
Entrepreneurship & Family Business Specialization									
MCH 108B	ENTREPRENEURSHIP: THEORY AND PRACTICES	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH125 B	CREATIVITY & INNOVATION IN ENTREPRENEURSHIP	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH103 B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH102 B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
Health Care Management Specialization									
MCH 110B	INTRODUCTION TO HEALTH CARE MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH103 B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH102 B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
Operations Management Specialization									
MCH111 B	PRINCIPLES OF MANUFACTURING	DMC	HARD	ELECTIVE	3	0	0	3	3

MCH103 B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH102 B	MICRO ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
Business Analytics Specialization									
MCH129 B	INTRODUCTION TO BUSINESS ANALYTICS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH130 B	BASICS OF DATA MANAGEMENT WITH R & PYTHON	DMC	HARD	ELECTIVE	2	0	2	4	3
MCH218 B	MANAGERIAL ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH103 B	ACCOUNTING FOR MANAGERS	DMC	HARD	ELECTIVE	3	0	0	3	3
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

Detailed Syllabus

BBA- First Semester

Course Title/Code	COMPUTERS AND INFORMATION SYSTEMS/CSW104B	
Course Type	Core	
L-T-P Structure	0-0-3	
Credits	1.5	
Course Objective	This is a basic paper for Business Administration students to familiarize with the computer and it's applications in the relevant fields and expose them to other related papers of IT.	
Course Outcomes (COs)		Mapping
CO1	Undersand the basics of Computer and it's evolution.	Employability
CO2	Exemplify in a better way the I/O and memory organization.Define different number systems, binary addition and subtraction, 2's complement representation and operations with this representation.	Skill Development
CO3	Analyze the input and Output Devices	Skill Development
CO4	Learn the operating system concept	Skill Development
Prerequisites (if any)		

SECTION A

Block diagram of computer, Function of different units of computer, Types of software (System and Application). I/O devices: Keyboard, Mouse, Joystick, Digitizer, Scanner, MICR, OCR, OMR, Light Pen, Touch Screen, Barcode Reader, Voice Input Device, Printer and its type (Impact and Non-Impact with example).
Introduction to operating system; Function of OS, Types of operating systems, Booting Procedure, Start-up sequence, Details of basic system configuration, Important terms like Directory, File, Volume, Label, Drive name, task manager, control panel etc, Creating back up, fragmenting the disks, creating directories etc.

SECTION B

Ms. word: Document Creating, editing, saving and printing text documents Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, Using lists and styles Working with images, Using Spelling and Grammar check, Header & Footers, Understanding document properties, Mail Merge

SECTION C

Ms. Excel: Spreadsheet basics Creating, editing, saving and printing spreadsheets Working with functions & formulas Modifying worksheets with color & auto formats Graphically representing data : Charts & Graphs Speeding data entry : Using Data Forms Analyzing data : Data Menu, Subtotal, Filtering Data Formatting worksheets Securing & Protecting spreadsheets.

SECTION D

Ms. Power Point Opening, viewing, creating, and printing slides Applying auto layouts Adding custom animation Using slide transitions Graphically representing data : Charts & Graphs Creating Professional Slide for Presentation.

References:
1. V.Rajaraman , Fundamentals of Computers-, 6h ed, Prentice Hall of India, 2014
2. P.K. Sinha, Fundamentals of Computers, 6ᵗʰed, 2014

Course s Code	Courses	Course Outcom es	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
		CO1	3	2	2	3		2	3	2	2	3	1	2			
		CO2	3	3	2	2	1	3	2	1	1	2	1	2			
		CO3	3	3	3	2		1			2	1					
CSW10 4B	CIS	CO4	2	3	2			1			2	1					

Course Title/Code	**BUSINESS STATISTICS / MCH106B**	
Course Type	Core	
L-T-P Structure	**3-0-0**	
Credits	**3**	
Course Objective	Learning important statistical techniques required for performing data analysis and its interpretation, as it further assists in managerial decision-making..	
Course Outcomes (COs)		**Mapping**
CO1	To provide basic knowledge of application of mathematics and statistics to business disciplines	**Skill Enhancement**
CO2	Develop the ability to analyse and interpret data to provide meaningful information to assist in making management decisions	**SKILL/EMPLOYABILI TY**
CO3	Develop an ability to apply modern quantitative tools to analyse business situations	**Entrepreneurship**
CO4	Conduct basic analysis of data	**SKILL/EMPLOYABILI TY**
Prerequisites (if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

1. Levin, Richard, David S. Rubin, Rastogi, and Siddiqui. Statistics for Management, 10th ed,.Pearson Education, 2016.

2. Siegel Andrew F. Practical Business Statistics, 6th ed, McGraw Hill, 2012.

3. Quantitative Techniques For Managerial Decision Making: Srivastava, Shenoy, Sharma,New Age Pub.

4. Statistical Methods: S P Gupta, Sultan Chand Publication.

5. Vohra N. D., Business Statistics, McGraw Hill.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH 106B	BUSINESS STATISTICS	CO1	2	2	3	2	3		1	2		1					
		CO2	3	2	3	2	3		2	2		1					
		CO3	3	1	3	2	3		1	2		1					
		CO4	2	1	3	2	2		1	2		1					

Course Title/Code	Business Communication –I/ EDH146
Course Type	Core
L-T-P Structure	3-0-0
Credits	3

Course Objective	Demonstrate effective interpersonal skills and the ability to work effectively in teams of diverse composition.	
Course Outcomes (COs)		**Mapping**
CO1	Develop communication knowledge and skills and will enhance their abilities to be effective in leadership and team roles.	**Skill Enhancement**
CO2	Demonstrate written communication skills appropriate for business situations.	**Skill Enhancement**
CO3	Gain confidence through individual and group exercises in physical and emotional awareness, improvisational skills, scene study, character creation and voice.	**Skill Enhancement**
CO4	Recognize their ethical responsibilities towards their community, society, discipline, and profession based on various perspectives and associated standards of ethical communication.	**Employability**
Prerequisites (if any)		

Section A

Grammar

Parts of Speech, Sentence, Identifying & Analyzing Grammatical Errors in sentences related to Pronoun, Article, Verb, Preposition, Jumbled Sentences, Reported Speech, Question Tags, Tenses, Active and Passive Voice, Tense

Section B

Introduction to Business Communication

Basic forms of communication, Process of communication, Impact of Encoding and Decoding in Communication (noise, codes, culture, technology), Principles of effective Business Communication, 7 Cs.

Media of Communication: Types of communication: Barriers of communication (Practical exercise in communication), Levels of Communication (interpersonal, intrapersonal, group, public); Communication as a Change Agent (silence, satire, artifice), Determinants in Impacting Communication; Social, Political, Cultural; Semiotics and Communication; Ideology and Communication, Communication models and processes; Theories of Communication.

Section C

Corporate Communication

Importance of communication skills in Business Management. Formal and Informal communication networks;

Grapevine; Miscommunication; Steps for improving communication.

Business manners.

Body language: Revelation of Inner Self, Importance of Body Language; Using Humour and Wit; Gestures, Etiquette of the written word, Structure of an effective Speech; Speaker's Credibility; Tips for Building Credibility

Business meetings: How to conduct and attend a meeting, Business Talk, Characteristics of Good Business Speaker; Importance of gestures, Practising the Art of Business Communication; Meeting, Playing role of effective team members in a meeting

Principles and steps of Group Discussions; Interviews; Seminars;

Business Presentation: Audience Analysis, Preparing effective Power Point presentation, Delivering of presentation, Handling questions

Feedback: Giving and Receiving,

Section D

Business Writing

Departmental Communication: Newsletters, Circulars, Agenda, Notice, Office memorandums, Office orders, Report Writing, Paraphrasing, bill collection, E-mail etiquettes and writing.

disciplinary action; persuasive messages; negative messages; job applications. CV Writing

Business letter writing: Need, Functions and Kinds. Layout of letter writing. Types of letter writing: Persuasive letters, Request letters, Sales letters, Complaints and Adjustments, Meaning, Need and types: Interview letters, Promotion Letters, Resignation letters.

References:

1. Chhabra T N; *Business Communication*: Concepts and Skills, Sun India Publications. New Delhi, 2016
2. Convey, R. Stephen; *The Seven Habits of Highly Effective People.*Paperback – Special Edition, 19 Nov 2013
3. E.H.McGrath, S.J.; *Basic Managerial Skills for All,*4th ed., Prentice Hall of India Pvt. Ltd., New Delhi, 2001.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
EDH146	BUSINESS COMMUNICATION – I	CO1	1			1	2	2		3	3			2			
		CO2	1	1			2	2		3	3						
		CO3	1	1			1	1	3	3	3	3					
		CO4					1	2	1	1		3					
		CO5			3					3							

Course Title/Code	**MARKETING MANAGEMENT /MCH105B**
Course Type:	Core
Course Nature:	Hard

L-T-P Structure	3-0-0
Credit	3
Course Objectives	The objective of this paper is to identify and develop knowledge and skills in application of the fundamental terms and concepts that are commonly used in marketing.

Course Outcomes (COs)		Mapping
CO1	To acquaint the students with the fundamental principles of Marketing	**Employability**
CO2	To enable students to understand marketing planning and strategies and market segmentation	**Employability**
CO3	To enable students to analyse branding and pricing decisions	**Entrepreneurship**
CO4	To enable students to take decisions using Marketing principles.	**Skill Enhancement**
Prerequisites (if any)		

SECTION A

An Overview: Introduction, Definition of Market, Types of Markets, Meaning and Definition of Marketing, Origin of Marketing, Scope of Marketing, Importance of Marketing, Functions of Marketing, Difference between Marketing and Selling; *Marketing Concepts:* Introduction, Exchange concept, Production concept, Product concept, Sales/selling concept, Modern marketing concept, Societal marketing concept, Impact of marketing concepts and its applicability; *Marketing Environment*: Introduction, Need and Importance of Environmental Analysis, Methods of Analysis – SWOT, PEST, Internal Environment of the Organization, External Environment; *Consumer Behaviour:* Introduction, Important definitions, Evolution of the study of consumer behavior, Determinants of consumer behavior, Types of buying decisions, Stages of the buying process, Importance of consumer behaviour study

SECTION B

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

SECTION C

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

distribution channel, factors influencing channel decisions, types of channels, direct channel, indirect channel, functions of channel members

SECTION D

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

References:

1. Philip Kotler and Kevin Lane Keller Marketing Management, Global Edition , 15 ed, Person, 2015
2. Michael J. EtzelBruce J. WalkerWilliam J. Stanton ,Ajay Pandit,Marketing, 14[th]ed, McGraw Hill Education, 2010

3. Lamb, W., Hair, J., McDaniel, C. (1998), Marketing, (4th edn), South-Western College Publishing, Cincinatti.
4. Gary Armstrong and Philip Kotler, Marketing: An Introduction, Pearson, 2017.
5. Kumar, Ramesh; "Application Exercises in Management,"Vikas Publishing House, 2004.

Courses Code	Courses	Course Outcomes	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	P01 1	PO1 2		PSO 1	PSO 2
MCH105B	MARKETING MANAGEMENT	CO1	3	2	3	2	3	2	3	3	2	2	3	3			
		CO2	3	3	3	2	2	1	3	2	2	2	3	3			
		CO3	3	3	3	3	2	2	3	2	2	2	3	3			
		CO4	3	3	3	3	2	2	3	3	3	3	3	3			

Course Title/Code	**MANAGEMENT PRINCIPLES & ORGANIZATIONAL BEHAVIOUR/ MCH121B**
Course Type	Core
L-T-P Structure	3-0-0

Credits	3
Course Objective	The objective of this course is to expose the students to basic concepts of Management and Organizational Behavior, in order to enable them to gain appreciation for emerging ideas, techniques, procedures and practices in the field of management.
Course Outcomes (COs)	**Mapping**
CO1	To acquaint & familiarize the students about the determinants of Management as a discipline, and discuss Interpersonal & Transactional analysis, thereof	**Skill Enhancement**
CO2	To enable an in-depth understanding of Leadership styles & Motivation theories, alongwith Individual Behaviour dimensions	**Skill Enhancement**
CO3	To familiarize the students about group behavior & team development for efficient Management control & social responsibility	**Employability**
CO4	To impart an understanding of organizational culture & contemporary Industry settings; change & conflict management, to deal with uncertainty & future of work	**Employability**
Prerequisites (if any)	

SECTION A

Concept and nature of management; Managerial competencies--**Communication, Planning, Decision making and Organizing:** nature and elements of planning, planning types and models, planning in learning organizations; Strategic planning – An overview; Decision making process, models of decision-making. Basic issues in organizing – work specialization, chain of common delegation, decentralization, span of management, bases for departmentation. Nature and meaning of Interpersonal Behavior, and Transactional Analysis; Benefits and uses of Transactional Analysis, Johari Window Model

SECTION B

Leading: recognition of human factors, leadership styles. Personal characteristics of effective leaders, leadership development; Leadership for learning organizations. Trait, behavioral, contingency theories, and managerial grid. Foundation of **Individual behavior- Personality**- meaning, self-concept, self-esteem, Major determinants of personality, **Motivation**- types of motivation, theories of work motivation given by Maslow, Herzberg, McGregor, Vroom and Porter – Lawler.

SECTION C

Management control, Managerial ethics and Social responsibility. **Group Behavior & Team development--**Group dynamics, Types of groups, Group norms and roles, Group cohesiveness, Group development and facilitation, Understanding work Teams and types of team, Creating effective team.

SECTION D

Contemporary Industry shifts &. Industry 4.0. Gig Economy parameters & Nature of Work towards futuristic Work Models. Organizational Culture-Concept, Functions, Socialization; Creating and sustaining culture; Managing Change & Managing Conflict – Sources, types, process and resolution of conflict.

References:

1. Robbins, S.P. and Decenzo, D.A. **Fundamentals of Management,**Pearson Education Asia, New Delhi
    2. Hellreigel**, Management**, Thomson Learning, Bombay
    3. Koontz, H and Wechrich, H**; Management**, Tata McGraw Hill
    4. Stoner, J et. al, **Management,** New Delhi, PHI, New Delhi
    5. Robbins & Coulter, **Management**, PHI, New Delhi
    6. Satya Raju, **Management – Text & Cases** , PHI, New Delhi
    7. Richard L. Daft, **Management**, Thomson South-Western
    8. Robins, Stephen P. - Organizational Behaviour, 16th ed, Pearson Education Asia, 2016
    9. Peter Schen , Organizational Psychology and Leadership , 5th ed, John Wiley and Sons, 2017
    10. Parikh, Gupta, Organizational Behaviour, 1st ed, Tata McGraw Hill, 2010
    11. Fred Luthans, Organization Behaviour, 12th ed, Tata McGraw Hill, 2010
    12. Newstrom, Organizational Behaviour: Human Behaviour at Work, 12th ed, Tata McGraw Hill, 2017

Course Code	Course	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH121B	MANAGEMENT PRINCIPLES & ORGANIZATIONAL BEHAVIOUR	CO1	3	2	3		3		3		2	2					
		CO2	3	3	3	2			3	2	2	2					
		CO3	3	3	3	3		2	3	2	2	2					
		CO4	3	3	3	3		2	3	3	3	3					

Course Title/Code	**FINANCIAL ACCOUNTING/ MCH109B**
Course Type:	Elective
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	The primary objective of the course is to familiarize the professional under graduate students with the basic accounting principles and techniques of preparing and presenting the accounts for user of accounting information.

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamentals principles of financial accounting, techniques of preparing and presenting the accounts for user of accounting information.	Employability
CO2	To enable the students to prepare, analyze and interpret financial statements	Skill Enhancement
CO3	To enable the students to take to understand the concept and uses of Computerized Accounting.	Skill Enhancement
CO4	To enable the students to learn Accounting Software packages that will help to understand the practical application.	Emplyability
equisites if any)		

SECTION A

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

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

SECTION C

Preparation of final accounts: Preparation of Trading and Profit & Loss Account and Balance Sheet, Introduction to Company Final Accounts: Important provisions of Companies Act, 1956 in respect of preparation of Final Accounts.

SECTION D

Preparation of final accounts of a Company, Computerized Accounting: Computers and Financial application, Accounting Software packages.

References:

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

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH 109B	FINANCIAL ACCOUNTING	CO1	2	2	1	1	3		2	1		2	1	2			
		CO2	2	2	1	1	2		3	1		2	1	2			
		CO3	3	2	1	1	2		2	1		2	1	2			
		CO4	2	3	1	1	3		2	1		2	1	2			

Course Title/Code	**MICRO ECONOMICS/ MCH102B**
Course Type:	Elective
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	The objective of this course is to familiarize the students with concepts and techniques used in Micro-Economic theory and to develop their capability to apply these concepts and techniques in making decisions pertaining to different business situations.

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamental knowledge Micro-Economics and its basic laws and principles.	Employability
CO2	To help students understand the theories of demand and supply and practically identify the different factors that affect demand and supply	Skill Enhancement
CO3	To understand analyze the different types of costs that form part of a production process and relate it with the laws of production.	Skill Enhancement
CO4	To make the students understand and evaluate the different types of markets operating in an industry.	Employability

equisites if any)	

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH102B	MICRO ECONOMICS	CO1	3	1	2	1	3	3		1		3	1	1			
		CO2	3	1	2	1	3	2		1		2	1	1			
		CO3	3	2	3	1	2	2		1		2	1	1			
		CO4	3	2	2	1	3	2	1	1		1	1	1			

Course Title/Code	**ENTREPRENEURIAL THEORY AND PRACTICES / MCH108B**

Course Type:	ELECTIVE
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Recognize the entrepreneurial potential within yourself and in your environment; Appreciate the role of entrepreneurship within society, at the level of the organization, and in your own personal life; Understand the process, nature of entrepreneurship, and ways to manage the process; this course will introduce the basic knowledge of various aspects of Entrepreneurship.

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamentals principles of Entrepreneurship	**Entrepreneurship**
CO2	To enable students to prepare, analyze & interpret matrices & models associated with Entrepreneurship	**Skill Enhancement**
CO3	To enable the students to take decisions by extrapolating opportunities/ initiatives into business models/ventures	**Entrepreneurship**
CO4	To have a thorough understanding of the various Entrepreneurship models and the nuances of their implementation	**Entrepreneurship**
equisites if any)		

SECTION A

Defining Entrepreneurship; what is an Entrepreneurial Mindset? The Entrepreneurial Process; An Integrative Model of Entrepreneurship. "Who" is the Entrepreneur? Sociological and Psychological Characteristics; The Different Types of Entrepreneurs; Nature versus Nurture, Why Entrepreneurs are not Born

SECTION B

standing The Nature of Opportunity & Defining Opportunity; An Opportunity is Different from a Business Concept; Sources and Types of Opportunity; Discovery versus Search; Where are the Emerging Opportunities; Evaluating Opportunity; Factors that Undermine an Opportunity; Windows of Opportunity; Understanding the Market and the Customer Needs. Entrepreneurial Skills such as Communication, Design Thinking, Personal Selling, and Risk and Resilience

SECTION C

Developing a Great Business Concept and Business Model From Product to Business Concept (the Value Proposition), From Business Model to Business Plan; The Nature of Successful Business Concepts; Sources of Concepts; What Makes for a Good Concept; Components of a Complete Business Model; A Look at Successful and Failed Business Models

SECTION D

Expectations about Size, Growth, Returns, and Risk, What About the Investment Model (Income, Growth, or Speculative)?; Ways of Extracting Returns from the Venture; Types of Ventures; What it Takes to Actually Start a Venture; Four Ways to Enter a Market; The Concept of Risk; Types of Risk; Assessing in a New Venture; Risk and Return.

References:
1. Rajeev Roy , "Entrepreneurship", 2nd ed, Oxford Higher Education, 2011
2. Bruce R. Barringer and R. Duane Ireland, Entrepreneurship: Successfully Launching New Ventures, 3rd Edition, Pearson Prentice Hall (2009).
3. Nandini Vaidyanathan. Entrepedia, A Step-by –step Guide to Becoming An Entrepreneur In India, 2nd ed, Publisher: Embassy Books Publishers & Distributors, 2011

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH 108B	ENTREPRENEURSHIP: THEORY AND PRACTICES	CO1	2	3	2	3	1	2	3	2	2	2	3	1			
		CO2	2	3	2	3	2	3	1	3	2	2	2	2			
		CO3	3	2	3	2	3	2	2	3	2	3	1	2			
		CO4	2	3	2	2	3	2	3	2	3	3	2	2			

Course Title/Code	**CREATIVITY, INNOVATION AND ENTREPRENEURSHIP/MCH125B**
Course Type:	Core
Course Nature:	ELECTIVE
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To acquaint the students with the concept & application of creativity & innovation in Entrepreneurship

Course Outcomes (COs)		Mapping
CO1	To acquaint the students with the concept & application of creativity & innovation in Entrepreneurship	Entrepreneurship
CO2	To enable the students to prepare, analyze and interpret matrices & models associated with creativity, leading to innovation	Entrepreneurship
CO3	To enable the students to recognize the aspects related to innovation implementation	Entrepreneurship
CO4	To familiarize the students with trends, government policy & associated industrial matrices of Innovation & Entrepreneurship	Entrepreneurship
equisites		

SECTION A

Models of Innovation, The underpinning of Profits: Assets, Competences and Knowledge, Sources and Transfer of Innovation, ***Creating a culture of Innovation

SECTION B

Recognizing the potential of Innovation, Reducing Uncertainty, Strategic Choice or environmental Determinism, Strategies for sustaining Profits

SECTION C

Financing Entrepreneurial activity, Implementation of the decision to adopt

SECTION D

Globalization of Innovations, Innovation for emerging economies, Role of National Govt in Innovation, Strategic Innovation Process

Case : The Internet

References:

1. Allan Afuah ,Innovation Management, 2nd ed, Oxford Publications, 2002
2. Robert D. Hisrich, ,Entrepreneurship, 8th ed ,McGraw Hill Education, 2013
3. Steven Fisher and Ja-Nae Duane , The Startup Equation, 1st ed.,McGraw Hill, 2016
4. Steve Conway & Fred Steward , Managing & Shaping Innovation ,Oxford University Press, 2012

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH125B	CREATIVITY, INNOVATION AND ENTREPRENEURSHIP	CO1	3	2	2	1	2	2	3	2	3	2	3	2			
		CO2	2	3	2	3	2	3	1	3	2	2	2	2			
		CO3	3	2	3	2	3	2	2	3	2	3	1	2			
		CO4	2	3	2	2	3	2	3	2	3	3	2	2			

Course Title/Code	ACCOUNTING FOR MANAGERS/ MCH103B
Course Type	Elective
L-T-P Structure	3-0-0
Credits	3

Course Objective	Participants who master the course will be able to identify (a), interpret (b an c) and analyze (d) the accounting information. Consequently student will be able to take financial decisions	
Course Outcomes (COs)		**Mapping**
CO1	To acquaint the students with the fundamentals principles of financial, cost and management accounting	**Skill Enhancement**
CO2	To enable the students to prepare, analyze and interpret financial statements and	**Employability**
CO3	To enable the students to make decisions using management accounting tools.	**Entrepreneurship**
CO4	To enable the students to make decisions using management accounting tools and techniques.	**Employability**
Prerequisites (if any)		

SECTION A

Basics of Accounting: Accounting process, Basic terminology, accounting principles and its application. Journal entries, Ledgers, Types of Accounting.

SECTION B

Trial Balance to Balance Sheet: TrialBalance, Adjustment entries, construction of Profit and Loss Accounts and Balance Sheet, Computerized Accounting System.

SECTION C

Cost Accounting - Elements of Cost, Types of Costs, Preparation of Cost Sheet. Standard Costing: Variance Analysis: Material Variances, Labour Variances, Simple Problems Related to Material andLabour Variances only. Break-Even Analysis - Cost Volume Profit Relationship.

SECTION D

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

References:

1. ACCOUNTING FOR MANAGERS, S. Ramanathan, Oxford University Press,2019.

2. Paresh Shah, BASIC ACCOUNTING FOR MANAGERS, Oxford, Delhi, 2017.

3. Ambrish Gupta, FINANCIAL ACCOUNTING FOR MANAGEMENT, Pearson, Delhi, 2019.

4. Narayanaswamy R, FINANCIAL ACCOUNTING , PHI, Delhi, 2017.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH103B	Accounting For Manager	CO1	2	3	3	2	2	1	3	3	1	x	1	1		1	1
		CO2	2	3	1	2	2	3	2	1	3	1	x	2		1	1
		CO3	3	3	2	2	2	2	1	3	2	3	x	1		1	1
		CO4	2	3	3	2	3	2	3	1	2	3	x	1		1	1

rse Title/Code	**INTRODUCTION TO HCM / MCH110B**
ourse Type:	Elective
urse Nature:	Hard
T-P Structure	3-0-0
t	3
rse Objectives	This course will introduce the basic knowledge of various aspects of Healthcare Industry. After the successful completion of the course student will be familiar with the scope and functions of Health Care Management

Course Outcomes (COs)		Mapping
CO1	Learn concepts and theories in health care management;	**Skill Enhancement**
CO2	Develop skills in using materials tools and/or technology central to health care mgt;	**Skill Enhancement**
CO3	Develop the basic understanding of sectoral coordination in hospital management	**Employability**
CO4	Distinguish between managing in a health care environment versus any other business setting	**Employability**
equisites if any)	

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SECTION A

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...uring of Health Care sector

...er the service provider(Government hospitals, Private hospitals, hospitals run by NGOs).

...er the services being provided (Primary, Secondary, Tertiary & Preventive).

...er the size of Hospitals (Sub Centre, Primary health care center, community health care, district hospitals and teaching institutions)

...lth Care Scenario- statistics of industry

...ent opportunities and Challenges in Health Care Management; worldwide scenario.

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SECTION B

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...iew of HR in Health Care**,** Manpower in Health Care Management

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SECTION C

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...y and regulations in Health C**are:** Quality in Health Care Management, Regulation in Health Care Management

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SECTION D

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Financing in Health Care: Accounts, Stores, Purchases**,** Fundraising and Analysis

References:

Sharon B. Buchbinde, Healthcare Management –with access, 3rs ed, Jones & Bartlett Publishers, 2017.

Sandra Buttigieg , International Best Practices in Health Care Management , Emerald Group Publishing Ltd, 2015.

Course s Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
		CO1	3	2	X	X	X	X	X	X	2	2	X	X		1	1
		CO2	3	3	3	2	X	X	3	2	2	2	X	X		1	1
MCH 110B	Introduction to HCM	CO3	3	3	3	3	X	2	3	2	2	2	X	X		1	1
		CO4	3	3	3	3	X	2	3	3	3	3	X	X		1	1

...rse Title/Code	<mark>**PRINCIPLES OF MANUFACTURING/ MCH111B**</mark>

Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
t	3
Course Objectives	This course will introduce the basic knowledge of various aspects of manufacturing. After the successful completion of the course, students will be familiar with the scope and functions of manufacturing.

Course Outcomes (COs)		Mapping
CO1	Learn concepts and theories in health care management;	Skill Enhancement
CO2	Develop skills in using materials tools and/or technology central to health care mgt;	Skill Enhancement
CO3	Develop the basic understanding of sectoral coordination in hospital management	Skill Enhancement
CO4	Explain the latest trends of Advanced manufacturing system and other relevant areas	Skill Enhancement
equisites if any)		

Section 1: Overview of Manufacturing: Define manufacturing and describe how it is used to solve problems. Research the five general steps of manufacturing (preparation, processing, assembly, finishing, and packaging). Research the history of manufacturing. Summarize its evolution from the Industrial Age to the rise of mechanization and automation in the manufacturing industry

Section 2: Quality Assurance and Continuous Improvement: research the three basic types of data that are important to controlling the manufacturing of a product: product output data, quality control data, and labor data. Examine common statistical processes to analyze data. As a class, develop standard procedures for analysis to apply to manufacturing projects throughout the course and program of study.

Section 3: Unit Process Variation and Control: Modeling and controlling temporal and spatial variation in unit processes, Factory Level System Variation and Control: Modeling and controlling flows in manufacturing systems with stochastic elements and inputs; Supply Chain – System Variation and Control: How to operate and design optimal manufacturing-centered supply chains

Section 4: Latest Trends in Advanced Manufacturing: Explore a range of new and emerging trends in advanced manufacturing. A trend could be the change in the types of skills needed in manufacturing, the use of computers, or the use of advanced materials in recent years. Examples include the following: a. Process control b. Materials design, synthesis, and processing c. Digital manufacturing technologies d. Sustainable manufacturing e. Flexible electronics manufacturing and f. Additive manufacturing. Research one or more of these trends in depth, and compile, review, and revise a presentation or a paper explaining both the technical aspects involved and the effects

on businesses, workers, and society.; Business Flows: Understanding the uses and flow of business information to start up, scale up and operate a manufacturing facility.

Books

Peter Fehrenbach ,The 12 Principles of Manufacturing Excellence: A Leader's Guide to Achieving and Sustaining Excellence **Larry E. Fast Productivity Press, 266 pages**

The Toyota Way to Lean Leadership: Achieving and Sustaining Excellence through Leadership Development,Jeffrey Liker, Gary Convis McGraw-Hill, 272 pages

Supply Chain Transformation: Building and Executing an Integrated Supply Chain Strategy,J. Paul Dittmann, **McGraw-Hill, 256 pages**

©2010 John Wiley & Sons, Inc. M P Groover, Principles of Modern Manufacturing 4/e SI Version

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH11 B	Principal of Manufacturing	CO1	1			1	2	2		3	3			2			
		CO2	1	1			2	2		3	3						
		CO3	1	1			1	1	3	3	3	3					
		CO4					1	2	1	1		3					

Course Title/Code	<mark>**INTRODUCTION TO BUSINESS ANALYTICS/MCH129B**</mark>
Course Type:	ELECTIVE
Course Nature:	Hard
L-T-P Structure	3-0-0
Course Objectives	By the end of the course, a student should be able to: Understanding the Role of Business Analyst in business.

Credit	3

	Course Outcomes (COs)	Mapping
CO1	Understand the basics of business analytics and data management and data handling	Skill Enhancement
CO2	Understand data warehousing & data mining concept and its techniques	Skill Enhancement
CO3	Understand the applications of machine learning & Big data concept	Skill Enhancement
CO4	Understand the application of business analysis in different Domain	Skill Enhancement
equisites if any)		

SECTION – A

Foundations of Analytics: Introduction of Business Analytics, its evolution, Scope & Usage in Business. Popular tools used for Analytics. Career in Business Analytics

Data: - Types of data & Data Classification, Data collection, Data management, Sources of data. Data quality, dealing with missing or incomplete data. Data Visualization - Dashboards and reporting.

SECTION B

Data Warehouse: Data warehouse- concept, definitions, purpose and applications, Data marts & Metadata; On-line analytical processing (OLAP) – concept and its applications.

Data Mining: Introduction to data mining, origins of Data mining, Tasks of data mining, Multidimensional data analysis, Concepts of association and cluster analysis.

SECTION C

Data Science, Machine learning – history and evolution, AI Evolution, Statistics vs. data mining Vs data analytics Vs data science. Supervised and unsupervised learning.

Big Data: Big Data and its importance, Industry Examples of Big Data, Big Data Technology; Hadoop.

SECTION D

Application of Analytics: Retail Analytics, Marketing Analytics, Financial Analytics Human Resource Analytics, Healthcare Analytics, and Supply chain Analytics

Text Books:

1. Essentials of Business Analytics: An Introduction to the methodology and its application, Bhimasankaram Pochiraju, SridharSeshadri, Springer.
2. Introduction to Machine Learning with Python: A Guide for Data Scientists 1st Edition, by Andreas C. Müller, Sarah Guido, O'Reilly

3. Introduction to Data Science, Laura Igual Santi Seguí, Springer
4. Fundamentals of Business Analytics" by R N Prasad and Seema Acharya

Reference Books
1. Camm, J.D. et al. (2015) . Essentials of Business Analytics. Cengage Learning
2. An Introduction to Business Analytics, Ger Koole, Lulu.com, 2019
3. Evans, J.R. (2017). Business Analytics. Pearson Publishing
4. Minelli, M.et al. (2014). Big Data, Big Analytics. John Wiley & Sons.
5. Michael J. A. Berry and Gordon S. Linoff (2004). Data Mining Techniques for marketing, Sales and CRM, John Wiley & Sons.
6. R.N.Prasad and Seema Acharya (2016). Fundamentals of Business Analytics, John Wiley & Sons

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12		PS O1	PS O2
MCH129B	Introduction to Business Analytics	CO1	1	1	3	2	2	1	1	2	2	1	2	2		1	1
		CO2	2	2	2	3	3	1	2	1	2	1	2	1		1	1
		CO3	1	3	3	2	3	1	1	2	2	1	2	1		1	1
		CO4	2	2	2	2	2	2	1	3	2	1	2	2		1	1

Course Title/Code	Basics of Data Management with "R & Python" /MCH130B)
Course Type:	Elective
Course Nature:	Hard
L-T-P Structure	2-0-2
Credit	3
Course Objectives	To provide basic knowledge of R & Python Syntax

Course Outcomes (COs)		Mapping
CO1	To gain knowledge of R ecosystem at a basic level	Skill Enhancement
CO2	To Conduct simple descriptive analyses and graphic analyses of data in R	Employability

CO3	To Familiarize students' with Python ecosystem at a basic level	**Skill Enhancement**
CO4	To gain practical experience of Data analysis using python	**Employability**
equisites (if any)		

Unit -1

1) Learn the basics of R Syntax
2) Learn how to organize and modify data in R using data frames and dplyr
3) Learn how to prepare data for analysis in R using dplyr and tidyr.
4) Learn the basics of how to create visualizations using the popular R package ggplot2
5) Learn the basics of aggregate functions in R with dplyr, which let us calculate quantities that describe groups of data

Unit -2

1) Learn the basics of joining tables together in R with dplyr
2) Learn to use R or manually calculate the mean, median, and mode of real-world datasets
3) Learn how to quantify the spread of the dataset by calculating the variance and standard deviation in R
4) Learn how to calculate three important descriptive statistics- Quartiles, Quantiles, and Interquartile range that describe the spread of the data
5) Learn about the statistics used to run hypothesis tests and use R to run different t-tests that compare distributions.

Unit -3

Introduction of Python, Jupyter Notebook, Python Functions, Python Types and Sequences, Python More on Strings, Reading and Writing CSV files

Unit - 4

Advanced Python Objects, map(), Numpy, Pandas, Visualization DataMatplotlib, Bar Charts, Line Charts, Scatter-plots. The Data Frame & Data Structure

Text Books:
1. Learning Python, 5th Edition by Mark Lutz, O'reilly
2. Mastering Apache Spark 2.x - Second Edition, by Romeo Kienzler, Packt Publishing Ltd.

Reference Books:
1. Python Programming for the Absolute Beginner By Michael Dawson, 2nd Edition, Premier Press, 2003
2. Image Processing and Pattern Recognition, Volume 5, 1st Edition, By Cornelius Leondes, Academic Press

Course s Code	Courses	Course Outcom es	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	P0 10	PO 11	PO 12		PS O1	PS O2
MCH13	**Basics of**	CO1	0	2	2	2	2	0	1	2	1	0	1	1		1	1

0B	Data Management with "R & Python"	CO2	0	2	2	2	2	0	1	2	1	0	1	1		2	1
		CO3	0	2	2	2	2	0	1	2	1	0	1	1		1	1
		CO4	0	2	2	2	2	1	1	3	2	1	1	1		2	1

	SEMESTER - 2									
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH113B	MACRO ECONOMICS	DMC	HARD	CORE	3	0	0	3	3
MCH114B	HUMAN RESOURCE MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
MCH115B	FINANCIAL MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
CSW105B	ADVANCED EXCEL	CST	WORKSHOP	CORE	0	0	3	3	1.5
CDO101B	PROFESSIONAL DEVELOPMENT PROGRAMME II	CDC	SOFT	UC	1	0	1	2	0

FINANCE AND ACCOUNTS

Code	Name								
MCH122 B	COST ACCOUNTING (FAA)	DMC	HARD	ELECTIVE	3	0	0	3	3
EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3
MCH213 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Entrepreneurship & Family Business Specialization

Code	Name								
MCH123B	FUNDAMENTALS OF DESIGN THINKING & VENTURE CREATION	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH124B	INTRODUCTION TO FAMILY BUSINESS MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3
MCH213 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Health Care Management Specialization

Code	Name								
EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3
MCH119B	FINANCING & BUSINESS DEVELOPMENT OF HOSPITALS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH126B	HEALTHCARE COMMUNICATION	DMC	HARD	ELECTIVE	3	0	0	3	3

MCH127 B	HEALTHCARE ECONOMICS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH21 3 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Operations Management

MCH11 7B	FUNDAMENTALS OF LOGISTICS	ME	HARD	ELECTIVE	3	0	0	3	3
MCH21 3 B	INDUSTRY PROJECT (TO BE EVALUATED IN 3 SEM)	DMC	NTCC	CORE	0	0	4	4	2

Business Analytics Specialization

EDH147	BUSINESS COMMUNICATION SKILLS- II	EDU	HARD	CORE	3	0	0	3	3
MCH131 B	Research Techniques	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH132 B	Descriptive Analytics	DMC	HARD	ELECTIVE	2	0	2	4	3
MCH121 B	SUMMER TRAINING (TO BE EVALUATED IN III SEM)	DMC	SOFT	CORE	0	0	4	**4**	2

COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT

BBA- Second Semester

se Title/Code	MACRO ECONOMICS/MCH113B

se Type:	Core
se Nature:	Hard
P Structure	3-0-0
t	3
se Objectives	The Macroeconomics course is designed to provide students with a unified frame work that can be used to analyze macroeconomic issues such as national income concepts, Money Supply, Inflation, National Income determination, International aspects of Macroeconomics and macroeconomic policies.

	Course Outcomes (COs)	Mapping
CO1	Students will be able to explain the concepts of gross domestic product, inflation and unemployment, and how they are measured.	**Skill Enhancement**
CO2	Students will be able to explain the circular flow model and use the concepts of aggregate demand and aggregate supply to analyze the response of the economy to disturbances.	**Employability**
CO3	Students will be able to describe the determinants of the demand for money, the supply of money and interest rates and the role of financial institutions in the economy.	**Employability**
CO4	Students will be able to define fiscal and monetary policies and how these affect the economy.	**Employability**
equisites if any)		

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

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

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

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

References:

1. Errol D'Souza, Macro Economics, 2/e, Pearson Education, 2012.
2. Aggarwal, Macroeconomics Theory and Policy, Pearson Education.1,e, paperback, 2010
3. Samuelson, Nordhaus, Chaudhri, Macroeconomics, Tata McGraw Hill, 19/e, 19th edition, 2010
4. D. N Dwivedi, Macro Economics, McGraw Hill Education, 4th edition, 2015

5. Mishra and Puri, Modern Macroeconomic Theory, Himalaya Publishing House. 17th ed, 2017

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH113B	**MACRO ECONOMICS**	CO1	3	1	2	1	3	3		1		3	1	1		2	2
		CO2	3	1	2	1	3	2		1		2	1	1		2	2
		CO3	3	2	3	1	2	2		1		2	1	1		2	2
		CO4	3	2	2	1	3	2	1	1		1	1	1		2	2

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

	Course Outcomes (COs)	Mapping
CO1	To develop the understanding of the concept of human resource management and to understand its relevance in organizations.	**Skill Enhancement**
CO2	To develop necessary skill sets for application of various HR issues.	**Skill Enhancement**
CO3	To analyze the strategic issues and strategies required to select and develop manpower resources.	**Employability**
CO4	To analyze the strategic issues and strategies required to select and develop manpower resources.	**Skill Enhancement**
equisites if any)		

SECTION A

Introduction: Concept, nature, scope, objectives and importance of HRM; Evolution of HRM; Environment of HRM; Personnel Management v/s HRM. Acquisition of Human Resources: HR Planning; Job analysis – job description and job

specification; recruitment – sources and process; selection process – tests and interviews; placement and induction. Job changes – transfers, promotions/demotions, separations

SECTION B

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

SECTION C

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

SECTION D

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

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

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PSO2
MCH114B	HUMAN RESOURCE MANAGEMENT	CO1	3	3	2	3	3	3	3	3	3	2	1	-		2	2
		CO2	3	3	2	3	3	1	3	3	3	2	1			2	2
		CO3	3	3	2	3	3	1	3	3	3	2	1			2	2
		CO4	3	3	2	1	3	3	3	3	3	2	1	-		2	2

ourse Title/Code	**FINANCIAL MANAGEMENT/MCH115B**

Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
	3
Course Objectives	Every decision that a firm makes has a finance component to it. Thus, finance includes all of a firm's decision that has financial implications. It broadly includes Investment Decisions, Financing Decisions & Management of Current Assets Decisions. These decisions, of course, have the implications on the firms' market/share value.

Course Outcomes (COs)		Mapping
CO1	To acquaint the students with the fundamental concepts of Financial Management & Time Value of Money	Skill Enhancement
CO2	To enable students to take decisions using Capital Budgeting techniques	Employability
CO3	To enable students to understand and apply concepts of working capital management	Employability
CO4	To enable students to analyze and apply the concepts of firm's value, capital structure theories, and dividend policy decisions.	Skill Enhancement
Prerequisites (if any)		

SECTION A

Overview, Time Value of Money; Overview of financial management – Introduction to finance, Cost of Capital :Cost of debt, equity, preference shares, determining the proportions, weighted average cost of capital, determining the optimal capital budget, Case Analysis

SECTION B

Capital budgeting process, Project classification, Investment criteria, Net present value, Benefit cost, ratio, Internal rate of return, Payback period, Discounted payback period, Accounting rate of return, Case Analysis

SECTION C

Working capital Management: Inventory management; Cash management, Credit management

SECTION D

Capital Structure and Dividend Policy, Leverages: Operating, Financial, Combined, Capital structure: Traditional position, Net income approach, Net operating income approach, , Modigliani and Miller position, ROI-ROE Analysis, EBIT-EPS analysis, Dividend Policy: Traditional Position, Walter Model, Gordon Model, MM Position, Determinants of Dividend Policy

References:

1. Chandra, Prasanna, "Fundamentals of Financial Management", 6e, McGraw Hill Pvt. Ltd, 2017
2. Ross, Stephen A; Westerfield, Randolph W.; Jordan, Bradford D, "Essentials of Corporate Finance", SIE, 11[th]ed, McGraw Hill Education, 2016

3. Pandey, I M, "Essentials of Financial Management," 4e, Vikas Publishing House, 2015

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	P0 10	PO 11	PO 12		PS O1	PS O2
MCH115B	FINANCIAL MANAGEMENT	CO1	3	3	3	1				3	1					2	2
		CO2	3	3	3	3		2	2	3	2	1				2	2
		CO3	3	3	3	2		1	2	2	2					2	2
		CO4	3	3	3	3		2	3	3	2					2	2

se Title/Code	**ADVANCED EXCEL/ CSW105B**
Course Type:	Core
Course Nature:	Workshop
L-T-PStructure	0-0-3
it	1.5
urse Objectives	At the end of this course, students will be able to understand the basic and advanced functions in Excel for business activities.

	Course Outcomes (COs)	Mapping
CO1	Acquire knowledge of multiple styles and different data formats in excel.	Skill Enhancement
CO2	Understand Excel IDE and improve productivity and efficiency	Skill Enhancement
CO3	Use various functionalities of Excel to perform the most complex calculations with ease.	Skill Enhancement
CO4	Manipulate large amounts of data with minimal requirements of time.	Employability
equisites if any)	

SECTION-A

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

SECTION-B

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

SECTION-C

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

SECTION-D

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

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

Excel LAB

SECTION A

Introduction to Excel : Excel Introduction• Basic formulae: Entering and editing data, Creating and copying formulae,

Creating• functions easily Formatting: Inserting/deleting rows/columns, Changing fonts, Colors and borders,• Merging

and aligning cells Printing: Page break preview, Using page layout view, Headers and footers, Freezing• print titles

Charts: Selecting data, Quick ways to create charts, Formatting your chart• Basic tables: Table styles, Using calculated

columns, Header rows and total rows• Case Exercises/ Practical Assignments/Activities

SECTION B

Advanced Excel : Sorting and filtering lists/tables of data, custom sort• Number formatting: Creating custom formats,

The four parts of a format, Scaling• numbers Dates and times: How dates and times are stored, Useful date/time

functions,• Formatting dates and times , Conditional formatting: Creating/using cell rules, Data bars and colour sets, Styles• and themes, How themes work, Using the default styles, Creating custom styles Validation and protection: Setting cell validation, Protecting cells/worksheets,• Grouping and outlining, Cell comments Range names and absolute references: Absolute references ($ symbol), Fixing only• the row/column, Creating range names, Labeling ranges automatically, Case Exercises/ Practical Assignments/Activities

SECTION C

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

SECTION D

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

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

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
CSW1 05B	ADVANCED EXCEL	**CO1**	1				3				1					2	2
		CO2	2													2	2
		CO3	2	3	2	2					2			3		2	2
		CO4									2		1			2	2

se Title/Code	**Professional Development Programme II/ CDO101B**
Course Type:	University Compulsory
Course Nature:	Soft
it	0
L-T-PStructure	1-0-1
se Objectives	The employability of students will improve as they will be able to communicate effectively a become aware about the importance of the four pillars of Communication – listenin speaking, reading and writing.

	Course Outcomes (COs)	Mapping
CO1	The employability of students will improve as they will be able to communicate effectively and become aware about the importance of the four pillars of Communication – listening, speaking, reading and writing.	**Skill enhancement**
CO2	The verbal and non- verbal communication skills of the students will improve.	**Skill enhancement**
CO3	They will be able to give presentations confidently and also speak fluently in various public speaking platforms like debate, declamation, and extempore. They will learn the effective use of body language.	**Skill enhancement**
CO4	They will be skilled in fluent reading	**Skill enhancement**
equisites if any)		

Section **1: Listening Skills**

1.1 The art of listening
1.2 Practicing listening skills
1.3 Intensive listening Vs extensive listening
1.4 Listening and note taking
1.5 Exercises of active listening.

Section **2: Speaking Skills**

2.1 Speaking practice in various social situations
2.2 Constructing small talks
2.3 Communication through Roleplays
2.4 Extempore

Section 3: Advanced Speaking Skills

3.1 Delivering Presentations
3.2 Body Language

Section 4: Reading Skills

3.1 The art of effective reading
3.2 Overcoming common obstacles
3.3 Types of reading – skimming, scanning, extensive reading, intensive reading
3.4 Tips for effective reading.

Section 5: Writing Skills

4.1 Avoiding common errors in construction of sentences and language
4.2 Practicing letter writing
4.3 Email Etiquette

Section 6: Professional Grooming and Etiquette

5.1 Professional grooming
5.2 Personal Grooming
5.3 Professional Etiquette
5.4 Courtesy and communication discipline

Text Books:

1. Basic Business Communication by C. B. Gupta, Sultan Chand and Sons
2. Soft Skills: Enhancing Employability by M.S. Rao, I .K. International Publishing House Pvt. Ltd

Reference Books:

1. Basic Business Communication by Raymond V Lesikar, Mc Graw – Hill publication
2. Communication Skills by Sanjay Kumar and Pushp Lata, Oxford University Press
3. Communication Skills by Prof. Monapally, Tata McGraw Hill publication
4. Living English Structure by W. S Allen, Pearson Education

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
CDO101B	**Professional Development Programme II**	**CO1**	1			3					1					2	2
		CO2	2													2	2
		CO3	2	3	2	2					2			3		2	2
		CO4										2		1		2	2

Course Title/Code	COST ACCOUNTING /MCH122B
Course Type:	Core(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	1. Understanding of basic concepts, analyses, uses and procedures of various cost and management accounting techniques.

	Course Outcomes (COs)		Mapping
CO1	To prepare learners to understand the Scope of Cost Accounting in any business activity.		Employability
CO2	To learn the Cost Accounting treatment in relation to Material Cost Accounting, employee cost and overheads.		Skill Enhancement
CO3	To enable the students to make decisions using cost accounting tools and techniques.		Skill Enhancement
CO4	To gain Knowledge about the reconciliation process and cost audit.		Employability
Prerequis ites (if any)			

SECTION A

Cost and Variance Measures: Comparison of expected results (budgets) to actual outcomes; Determine variances; Calculation and analysis of variances; Flexible budgets to analyze performance & management by exception; Standard cost systems - Flexible Budget & Variance Analysis, and Sales Volume Variance Analysis

Responsibility Centers & Reporting Segments: Types of responsibility centers; contribution and segment reporting; transfer pricing models; reporting of organizational segments

Performance Measures: Product Profitability Analysis; Business unit Profitability Analysis & Customer Profitability Analysis; Return on Investment (ROI); Residual Income (RI); RI vs. ROI; Balanced Scorecard; Performance Measures and Reporting Mechanisms
.

SECTION B

Measurement Concepts: Define and classify costs to understand how they can be used to measure performance; Manufacturing Costs, Cost Drivers & Pre–determined Overhead Rate; Cost Flows: COGM → COGS; Types of Costs – Actual, Normal, and Standard Costing, Fixed & Variable Costs, Absorption & Variable Costing, and Joint Product Costing and By–Product Costing

Costing System: Job order vs. Process costing; Activity-based costing; Life-cycle costing; Operation costing, and Backflush costing

Overhead Costs: Fixed and variable overhead expenses; Plant-wide, departmental, and ABC overhead costing; Allocation of service department costs

Supply Chain Management: Material requirements planning; Just-in-time manufacturing; Outsourcing; Theory of constraints; Capacity concepts; Other production management theories

Business Process Performance: Value chain analysis; Value-added concepts and quality; Process analysis; Benchmarking; Activity-based management; Continuous improvement (Kaizen) concepts; Best practice analysis; Cost of quality analysis.

SECTION C

Basic Financial Statement Analysis: Common-size financial statements; Trend analysis and review the growth rates of the various elements of the financial statement; Statement of cash flows

Financial Performance Metrics: Financial Ratios; Working capital analysis - Liquidity/solvency ratios and Capital structure analysis

Profitability Analysis: Earnings per Share; Sustainable Equity Growth; Return on Capital Investment; Revenue Analysis; Income measurement Analysis and Limitations of Ratio Analysis

Special Issues: Differences in accounting measurement; Economic complexities - inflation and foreign currency transactions; Economic profit and accounting profits; Earnings quality; Effects of changing prices and inflation; Fair value standards; Accounting for foreign currency and Differences in financial results: IFRS vs. GAAP

SECTION D

Cost/Volume Profit Analysis: Fixed & Variable Costs; CVP Analysis (Break-even Analysis); Income Taxes and CVP Analysis; Sensitivity Analysis and CVP and Analysis of multiple products

Marginal Analysis: Special Orders and Pricing; Make vs. Buy; Sell or Process further; Add or drop a segment; Income Taxes and Marginal Analysis

Pricing: Setting Prices; Market-based Pricing; Cost-based Pricing & Target pricing; Laws of demand and demand curve; Law of supply and supply curve; Market equilibrium and Price elasticity of demand

References:
14. Varun Jain, CPA, CMA and DwijavantiVaratharajan, CPA , Financial Reporting, Planning, Performance and Control (Class Notes to Wiley CMA excel Learning System) – 2017 Edition;
15. Varun Jain, CPA, CMA and DwijavantiVaratharajan, CPA , Financial Decision Making (Class Notes to Wiley CMA excel Learning System) – 2017 Edition;
16. Financial Reporting, Planning, Performance and Control – 2017 Edition; Wiley CMA excel A System Exam Review, Part 1, John Wiley & Sons, Inc.
17. Financial Decision Making – 2017 Edition; Wiley CMA excel Learning System Exam Review, Part 2, John Wiley & Sons, Inc.
18. Steven M.Bragg , Cost Accounting Fundamentals: Essential concepts and examples, fifth edition; 2016

19. M.N. Arora, Methods & Techniques of Cost Accounting , 3rd Ed, Himalaya Publishing House, 2011
20. S.P. Jain and K L Narang, Cost Accounting – Principles and Practices, 21st Revised Edition; Kalyani Publishers, 2014

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH122B	COST ACCOUNTING	CO1	2	2	1	1	3		2	1		2	1			1	1
		CO2	2	2	1	1	2		3	1		2	1			1	1
		CO3	3	2	1	1	2		2	1		2	1			1	1
		CO4	2	3	1	1	3		2	1		2	1			1	1

Course Title/Code	**BUSINESS COMMUNICATION SKILLS II/ EDH147**
Course Type:	Core
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To develop the skills of the professional undergraduate students for proper self-expression, social communication, spoken English, correct pronunciation, voice modulation and business etiquettes.

Course Outcomes (COs)		Mapping
CO1	Develop communication knowledge and skills and will enhance their abilities to be effective in leadership and team roles.	**Skill Enhancement**
CO2	Demonstrate written communication skills appropriate for business situations.	**Skill Enhancement**
CO3	Gain confidence through individual and group exercises in physical and emotional awareness, improvisational skills, scene study, character creation and voice.	**Skill Enhancement**
CO4	Recognize their ethical responsibilities towards their community, society, discipline, and profession based on various perspectives and associated standards of ethical communication.	**Skill Enhancement**
equisites if any)		

SECTION-A

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

SECTION-B

Theatre and Communication

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

SECTION-C

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

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

SECTION-D

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

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

Impact of Encoding and Decoding in Communication (noise, codes, culture, technology);Communication and Gratification: Four Models: Publicity Model; Ritual Model; Convergence Model; Reception Model;Creativity and Communication: Situation Writing and Situational Dialogues, Defining an Object (pictorial description), Expansion of Proverbs and Ideas;Grammar and Vocabulary: Synonyms, Antonyms, Reading Comprehension, Jumbled Sentences, Modifiers

Lab Exercises

Exercises related to Grammar

Exercises related to Creativity and Writing

Mock Interviews

Extempore

Group Discussion
Debate
Role Plays (Meeting)
Final production of a one act play/ scene
Introduction to Articulation Skills (Conversation:Telephonic and Face-to-Face)
Listening to Understand (Hearing vs. Listening)
Listening for Interpersonal Effectiveness
Techniques & Levels of Reading Comprehension

References:
21. Amodio, Mark C. Writing the Oral Tradition: Oral Poetics and Literate Culture in Medieval England; 1st ed.,ND University of Notre DamePress, 2004.
22. Barun K. Mitra, Personality Development and Soft Skills, 2 nd ed., Oxford University Press, 2011.
23. Beardsley, M. C., "Aspects of Orality: A Short Commentary", New Literary History 8,3 Spring 1977.
24. Bel, B. et al., Media and Mediation, 1st ed., Sage, New Delhi. 2005.
25. Bernet, John R, Mass Communication, An Introduction, Prentice Hall. 1989.
26. ConarNira, Communication Skills for Professionals, 2nd ed., PHI Pvt. Ltd.
27. Fiske,John, Introduction to Communication Studies, 2nd ed. Routledge. 1990.
28. Guffey Mary Ellen, Business Communication: Process and Product, 5th ed, South-Western,Thomson Publishing, 2005.
29. Hurlock, B Elizabeth; Personality Development, 1st ed., Tata McGraw Hill. 1976.
30. McQuail, Dennis, Mass Communication Theory, 4th ed., London, Sage. 2000.
31. Pareek Udai; Understanding Organizational Behaviour, 2nd ed., OxfordUniversity Press; 3 ed. 2011.
32. Penrose and Rasberry, Business Communication for Managers: An advanced approach, 5ed., Cengage Learning, 2007.
33. Pushpa Lata, Kumar Sanjay, Communicate or Collapse: A Handbook of Effective Public Speaking, Group Discussions and Interviews, 1 st ed., PHI Pvt. Ltd. 2007
34. Rogets Thesaurus of English Words and Phrases, Penguin Reference; by George Davidson (Editor), Paperback 2004.
35. Schechter Joel Popular Theatre: A Sourcebook, Routledge, 2013.
36. Viswanathan Rajeesh, Business Communication, Himalaya Publishing House, Mumbai, India, 2011.
37. Wren & Martin; New Ed. ; High School;English Grammar & Composition Revised   by N.D.V. Prasada Rao; S. Chand, Paperback
38. Yukl G; Leadership in Organisation: 8 th ed., Prentice- Hall. 2013

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
EDH147	BUSINESS COMMUNICATION SKILLS-II	CO1		1			3	2	2	3	3			3		2	2
		CO2	2				3	2		3	3			3		2	2
		CO3					2	2	3	3		2		3		2	2
		CO4						2		1		3				2	2

Course Title/Code	**Fundamentals of Design Thinking & Venture Creation/MCH123B**
Course Type:	Elective
Course Nature:	Hard
L-T-P Structure	3-0-0
	3
Course Objectives	This course will introduce the basic knowledge of design thinking. After the successful completion of the course student will be familiar with the scope and functions of new venture

Course Outcomes (COs)		Mapping
CO1	To Understand the Basics of Design Thinking	**Entrepreneurship**
CO2	To Understand the design thinking processes	**Entrepreneurship**
CO3	To be able to apply the Design Thinking in practice with tools and methods	**Entrepreneurship**
CO4	To be able to apply Design thinking in application and product development	**Entrepreneurship**
Prerequisites (if any)		

Section A

Background & evolution of Design Thinking: Concept & Definition of Design Thinking; Business uses of Design Thinking; Design Thinking Mindset. Design thinking approach: Empathy, Ethnography, Divergent Thinking, Convergent Thinking & Visual Thinking. Assumption Testing & Prototyping

Section B

Design thinking resources: People, Place, Material & Organizational fit. Design Thinking processes: Double Diamond Process, 5-Stage d.School Process, Designing for Growth Process, Role of Project Management

Section C

Design Thinking in practice; Process & stages. Design thinking Tools & Methods—What is; Visualization, Journey Mapping, Value chain analysis, Mind mapping. What if; Brainstorming &

Concept Development. What Wows; Assumption testing, Rapid Prototyping. What works; Customer co-creation, learning launch

Section D

Design thinking application & product development. Case studies. Design thinking & growth strategies. Double diamond approach & its relevance. User centric design thinking theories.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH123B	FUNDAMENTALS OF DESIGN THINKING AND VENTURE CREATION	CO1	1	2	1	x	3	2	2	1	2	x	2	1		1	1
		CO2	1	2	1	1	1	2	2	1	1	x	2	2		1	1
		CO3	2	2	1	1	1	3	1	2	1	x	2	2		1	1
		CO4	2	1	1	2	2	2	x	2	1	x	2	3		1	1

rse Title/Code	<mark>**Introduction to Family Business Management/ MCH124B**</mark>
ourse Type:	Core (Departmental)
ourse Nature:	Hard
T-P Structure	3-0-0
	3
rse Objectives	This course will introduce the basic knowledge of various aspects of Family Business. After the successful completion of the course students will be familiar with the scope and functions of Family Business.

Course Outcomes (COs)	Mapping

CO1	Understand the concept, characteristics and importance of family business and its differences to non-family businesses.	**Entrepreneurship**
CO2	Understand and apply the Concept of 3 Circle Model of Family business and how each of the circles corresponds to different life cycles of stages of growth.	**Entrepreneurship**
CO3	Describe the governance structure of family controlled businesses and identify the various family governance institutions through which effective governance is ensured	**Entrepreneurship**
CO4	Understand the need of Succession and continuity planning and how it can be planned.	**Entrepreneurship**
equisites (if any)		

Unit I

Family Business: Concept of Family Business- Importance and Characteristics of Family Business, Uniqueness of Family Business- what makes the family enterprise so successful? History of Family Business, Family Business v/s Non family Business, Systems theory perspective, 3 Circle Model of Family Business, Life cycle of Family Business- Ownership, business and family dimension, Advantages of FB, key challenges facing the family businesses in India.

Unit II

Understanding Family Business dynamics: The Family Systems theory, Role of Genograms in family system- Family and ownership of business dichotomy- Responsibilities and rights of a shareholder of a family business, effective governance, Family Constitution, Planning for Succession in law, Conflicts in the family, Resolving the conflicts, Stages of Conflict.

Unit III

Family Business and Governance: meaning and challenges to family governance, Advisory board and board of directors- Responsibilities, Family meetings and Family Councils– Role and benefits, Family offices, Board and Family Council- how they work together, professional management, effective outside boards.

Unit IV

Leadership and the imperatives for family business- Succession and Continuity, Succession-importance, Family leaders- roles and responsibilities. Succession- importance, succession planning and continuity planning mindset, CEO exit styles, next generation leader characteristics, steps in succession planning and transfer of power.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
	INTRODUCTION TO FAMILY BUSINESS MANAGEMENT	CO1	3	2	1	1	2	2	2	2	2	2				1	1
		CO2	3	2	2	1	3	2	3	3	2	2				1	1
		CO3	2	3	1	1	3	2	2	3	2	2				1	1
MCH124B		CO4	2	2	1	1	3	2	2	2	2	2	3	2		1	1

Course Title/Code	<mark>FINANCING AND BUSINESS DEVELOPMENT OF HOSPITALS/ MCH119B</mark>
Course Type:	Core(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	After the successful completion of the course, students will have knowledge and skills to handle accounting and finance of hospitals. Students are trained and aware with marketing tools and methods for Hospitals

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the marketing strategies of healthcare industry	**Employability**
CO2	To enable the students to apply inbound, outbound, social and referral marketing strategies in healthcare industry	**Employability**
CO3	To enable students to understand different media mix strategies adopted in healthcare industry	**Employability**
CO4	To analyze and formulate the marketing and financing strategies of the	**Employability**

	healthcare industry.	
Prerequis ites (if any)		

SECTION A

eting of Hospitals :

uction of Marketing, Understanding Marketing Management, Marketing Team & Organogram, Developing marketing strategies & Plans, Developing Brand strategies, Developing pricing strategies, Developing, Managing and Measuring of marketing channels, Managing and Measuring marketing competition, Managing and Measuring marketing communication

SECTION B
eting tools for Hospitals:

- our ALLY or ENEMY, Introduction to Social, Corporate and Referral Marketing, Referral Marketing, Social Marketing, Corporate Marketing, Legal Implications of Marketing, Entering in New Market, Launching New Product/Department, Socially Responsible Marketing, The Future of Marketing, Marketing to the Millennial Generation, Managing Relationship & Building loyalty , Leadership Roles in Marketing, The search for Leadership

SECTION C
g and Revenue of Hospitals :

- Billing, Collection & Settlement (With Journal Entries), IPD - Billing, Collection & Settlement (With Journal Entries), Revenue from other than operating activity-Interest income, Pharmacy income

SECTION D
Direct & Indirect Expenses and Taxes

Expenses- Consultancy & Consumable, Direct Expenses- Drug & Disposable & Outsource share, Indirect Expenses- HR Expense & Admin expense, Indirect Expenses- Sales & marketing, Utility, Maintenance expense & Revenue Sharing/rent Expense, Collection Process, Fixed Assets, Ratio Analysis, Direct Tax-Income Tax (TDS), Indirect Tax-Service Tax and Vat

References:

39. Louis C. Gapenski, Healthcare Finance, 6TH, Assoc. of Univ. Programs in Health Administration, 2016

40. Bamford Morton-Cooper Bamford Cooper Cavanagh Morton-Cooper, Excellence in Health Care Management , 1st ed, Blackwell Science Inc, 1997.

41. Eric. N Berkowitz, Essentials Of HealthCare Marketing-J&B, Jones And Bartlett Publishers, Inc, 2003

Course s Code	Courses	Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2

Course Title/Code	Healthcare Communication/ MCH126B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0-0
Credit	3
Course Objectives	Introducing students to the field of communication and healthcare communication in particular along-with using strategic communication to meet both personal and professional objectives in the digital age.

	Course Outcomes (COs)	Mapping
CO1	Analyze and describe how sociohistorical, social, political, and cultural factors affect health communication and healthcare.	**Skill Enhancement**
CO2	Understand the correlation of theory and practice in health communication settings and campaigns.	**Employability**
CO3	Identify the strategies to target various audiences and health communities for health communication campaigns by developing written, oral, and graphical communication skills necessary in medical and public health contexts.	**Employability**
CO4	Develop effective health messages for individuals and publics by understanding how the media, literacy and policy affect the perceptions of health	**Employability**
equisites if any)	

Section - A

Personal and Professional Foundations

· Communication: A Management Tool

- The Strategic Communication Process

- Interpersonal Skills

- Put It in Writing

- Presentations That Deliver

Section - B

- In-House Communications

- Working with PR & Corporate Communications

-

Section – C

- Barriers to Improving Communication.

- Creating Community Relationships

- Importance of Effective Measurement

Section – D

- Fundamentals of Social Media & its use in Healthcare

- Technology Implications in Healthcare Communication

References:

1. The Oxford Handbook of Health Communication, Behavior Change, and Treatment Adherence

2. Park's Textbook of Preventive and Social Medicine - Textbook by K. Park

3. BEYOND PERSUASION: Communication Strategies for Healthcare Managers in the Digital Age – Patricia J Parsons

Course s Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH1 26B	Healthcare Communication	CO1	1	X	2	1	2	2	X	3	3	X	X	3		1	1
		CO2	1	X	2	1	2	2	X	3	3	X	X	3		1	1
		CO3	1	X	2	1	2	2	3	3	3	3	X	3		1	1
		CO4	1	2	2	X	1	2	1	1	2	3	X	1		1	1

Course Title/Code	**Healthcare Economics/ MCH127B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	This course will introduce the basic knowledge of various aspects of healthcare. After the successful completion of the course, students will be familiar with the scope and functions of economics in healthcare.

	Course Outcomes (COs)	Mapping
CO1	To introduce students to the field of Health Economics & Policy	Employability
CO2	To understand the healthcare market and its demand and supply in relation with healthcare economics.	Employability
CO3	To understand the various issues of healthcare Economics.	Skill Enhancement
CO4	To gain knowledge about the Healthcare Economic Evaluations & Public Policy	Skill Enhancement
Prerequisites (if any)	

SECTION - A

- Introduction to Health Economics

- Economics and Policy

- Relevance of Health Economics

- Key Concepts

- Indian Health Care Economics

- Healthcare workforce Market

SECTION - B

- Demand for Healthcare

- Market for Health Care Insurance

- Healthcare Production, Supply and Cost

- Role of Government & Market Failure

SECTION – C

- Issues in Health Economics

  o Socio-economic Factors

  Issues in Hospital Industry

  o Issues in Pharmaceutical Industry

SECTION – D

o Economic Evaluations

o Comparing Healthcare Systems

o Public Policy & Health Economics

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH127B	HEALTHCARE ECONOMICS	CO1	3	1	2	1	3	3		1		3	1	1		1	1
		CO2	3	1	2	1	3	2		1		2	1	1		1	1
		CO3	3	2	3	1	2	2		1		2	1	1		1	1
		CO4	3	2	2	1	3	2	1	1		1	1	1		1	1

Course Title/Code	**FUNDAMENTALS OF LOGISTICS/MCH117B**
Course Type:	Core(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	The Objective of this course is to gain the knowledge of possibilities of efficient optimization and management of operation in Logistics Management and also the ability to apply them in the enterprise reality.

Course Outcomes (COs)		Mapping
CO1	To gain knowledge of basics of logistics management	Skill Enhancement
CO2	to gain the knowledge of possibilities of efficient optimization of operation in Logistics Management	Skill Enhancement
CO3	To apply the concepts of effective logistics management	Employability
CO4	To understand and apply the concepts of Material Storage System & Warehousing	Employability
equisites if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	P0 10	PO 11	PO 12		PS O1	PS O2
MCH117B	FUNDAMENTALS OF LOGISTICS	CO1	3	3	2	2	2	1	1	2	1	1	3	1		1	1
		CO2	3	3	2	2	1	1	1	2	1	1	3	1		1	1
		CO3	3	2	3	2	1	1	1	1	1	1	3	1		1	1
		CO4	3	2	3	2	1	1	1	1	1	1	3	1		1	1

Course Title/Code	**Research Techniques/ MCH131B**
Course Type:	**Elective(Departmental)**
Course Nature:	**Hard**
L-T-P Structure	**3-0-0**
Credit	3

	Course Outcomes	The course enables the students to understand the research process, tools, and techniques. The students will analyze hypothesis testing using research techniques in SPSS

	Course Outcomes (COs)	Mapping
CO1	To familiarize students with nature and scope of the marketing research process	Skill Enhancement
CO2	To understand research design, data purification, and handling	Skill Enhancement
CO3	To understand and apply hypotheses testing	Employability
CO4	To be able to analyze factor analysis on SPSS	Employability
equisites if any)		

SECTION A

Introduction to marketing research, Marketing research process: Problem Identification, Research Design Formulation, Scaling Techniques

SECTION B

Research design: Exploratory, Descriptive, Causal, Data purification and handling: Missing data, Outliers, Normality, Hypothesis testing, Sampling: Non-Probability and Probability Sampling, Hypotheses development

SECTION C

Importance of power of test, Factor affecting power of test, Significance of p-values, Type I and Type II errors, Hypotheses Testing

SECTION D

Exploratory and Confirmatory factor analysis, Application of factor analysis, Scree Plot, Rotation, Correlation Matrix, Application in SPSS

References

- **Multivariate Data Analysis Joseph F. Hair, William C. Black, Barry J. Babin Pearson Education, 2010**

- **Marketing Research: An Applied Orientation (Paperback)by Naresh K. Malhotra**

- **Multivariate Methods for Marketing and Survey Research (Hardcover) by Jagdish N. Sheth**

- **Market Research and Analysis (Hardcover) by Donald R. Lehman**

Course s Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH131B	Research Techniques	CO1	1	2	3		1	2	3		1	2	3			1	1
		CO2		1	2	3		1	2	3		1	2	3		1	1
		CO3	2			2			3			3				1	1
		CO4	1	1	2	2			1	1	2	2		3		1	1

se Title/Code	**Descriptive Analytics /**MCH132B
se Type:	Elective
se Nature:	Hard
Structure	2-0-2
Credit	3
se Objectives	The objective of this course is to make students exercise the fundamentals of Statistical Analysis in Excel and R environment. They would be able to analyze data for the purpose of exploration using Descriptive and Inferential Statistics.

	Course Outcomes (COs)	Mapping
CO1	To use R Studio and Excel to perform data visualization tasks	Employability
CO2	Describe key terminologies, concepts and terminologies employed in Statistical Analysis/Descriptive Analytics	Employability
CO3	Define, Calculate and Implement probability and probability distribution to solve wide variety of problems	Employability
CO4	Conduct and Interpret a variety of hypothesis tests to aid Decision making	Skill Enhancement
equisites if any)	

Section A

Introduction to Descriptive Analytics: Data visualization- Dashboards, Tools and Software's for creating charts in Microsoft Excel & R Studio, Data Queries – Tables, Sorting and Filtering, Statistical Methods for Summarizing Data. Introduction to R Programming – R and RStudio, Basic data manipulation techniques, Data Frames and Use of various apply functions, missing values and outliers treatment.

Section B

Descriptive Statistical Methods: Population and Samples, Measures of Location – using measures of Location in Business Decisions, Measures of Dispersion, Measures of Shape, Measures of Association.

Section -C

Probability, Probability & Sampling Distributions: Experiment, Sample Space and Events, Classical Probability, General Rules of Addition, Conditional Probability, Probability Distributions. Statistical Inference and Hypothesis Testing: Hypothesis testing

Section - D

One Sample Hypothesis Test, Two-Tailed hypothesis for the Mean, Two-Sample Hypothesis Test, Analysis of Variance (ANOVA), and Chi-Square Test. Correlation and Regression.

Text Books:
- James R. Evans, 2017, Business Analytics – Methods, Models and Decisions
- Ken Black , 2013, Business Statistics , New Delhi, Wiley
- Umesh R. Hodeghatta & Umesha Nayak , Business Analytics using R – A practical Approach.

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH132B	Descriptive Analytics	CO1	2	1	3	3	1	1	1	2	1	2	2	2		1	2
		CO2	2		2	3	3	1	2	2	1	0	2	1		2	2
		CO3	1	2	2	2	2	1	1	2	2	1	2	1		1	1
		CO4	2	2	2	2	2	2	1	3	2	1	2	2		2	1

SEMESTER - 3										
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS

MCH201B	BUSINESS LAW	DMC	HARD	CORE	3	0	0	3	3
ECH212B	MANAGEMENT INFORMATION SYSTEMS	ECE	HARD	CORE	2	0	2	4	3
MCH217B	RESEARCH METHODOLOGY	DMC	HARD	CORE	3	0	0	3	3
MCH203B	OPERATIONS MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
FLS101, 102,103	FOREIGN LANGUAGE	MRV FL	SOFT	UC	2	0	0	2	0
CHH137	ENVIRONMENTAL SCIENCES	CHEM DEPT	HARD	UC	4	0	0	4	4
ELECTIVE									
FINANCE AND ACCOUNTS									
MCH234B	FINANCIAL SERVICES (FAA)	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH239B	MANAGEMENT ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH205B	INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
Entrepreneurship & Family Business Specialization									
MCH241B	FAMILY BUSINESS GOVERNANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH242B	BUSINESS MODELLING	DMC	HARD	ELECTIVE	3	0	0	3	3
Healthcare Management Specialization									
MCH210B	CLINICAL SERVICES	DMC	HARD	ELECTIVE	3	0	0	3	3

MCH211B	PLANNING AND DESIGN OF HOSPITALS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH237B	EPIDEMIOLOGY (HCM)	DMC	HARD	ELECTIVE	3	0	0	3	3
Operations Management									
MCH208B	TOTAL QUALITY MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH209B	WAREHOUSING MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
Business Analytics Specialization									
MCH 244B	Python Programming	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH245B	**Structured Query Language (SQL)**	CSE	HARD	ELECTIVE	2	0	2	4	3
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

BBA- Third Semester

Course Title/Code	**BUSINESS LAW/MCH201B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To acquaint the student with a basic and elementary knowledge of the subject.

Course Outcomes (COs)		Mapping
CO1	To acquaint the students with the fundamental knowledge of Business Law and Indian Contract Act.	Employability
CO2	To identify and interpret the different contracts like Indemnity, Bailment, Pledge, Guarantee etc in context of day to day life	Employability
CO3	To analyze and understand the concepts and implications of Sales of Goods Act, 1930, Negotiable Intsrument Instrument Act, 1881	Employability
CO4	To acquaint the students with the basic knowledge of Indian Companies Act, 2013	Employability
equisites if any)		

SECTION A

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

SECTION B

Contracts of Indemnity, Guarantee, Bailment, Pledge and Agency

SECTION C

Sale of Goods Act 1930 Meaning of Sale and Goods, Conditions and Warranties, Transfer of Property, Rights of an unpaid seller.
The Negotiable Instruments Act 1881 – Essentials of Negotiable Instruments, Kinds of N.I. Holder and Holder in Due Course, Negotiation by endorsements, crossing of a cheque and Dishonor of a cheque.

SECTION D

The Companies Act 1956 (Basic elementary knowledge) essential characteristics of a company, types of companies, memorandum and articles of association prospectus, shares – kinds, allotment and transfer, debentures, essential conditions for a valid meeting, kinds of meetings and resolutions.
Directors, Managing Directors, their appointment, qualifications, powers and limits on their remuneration, prevention of oppression and mismanagement

References:

1. M.C. Kuchhal&VivekKuchhal, Business Law, 6thed, Vikas Publishing House, New Delhi, 2013
2. Bagrial, Ashok; Company Law, 12thed, Vikas Publishing House, 2012
3. Kapoor, N. D., "Elements of Mercantile Law", Sultan Chand & Sons, New Delhi,2003
4. Kapoor, N. D.; Elements of Company Law, Sultan Chand & Sons, New Delhi, 2003.
5. Sen and Mitra; Commercial Law including co. law, 23rd ed, World Press Calcutta ,2002.
6. Jhabvala, N.H.; Law of Contracts, C. Jamnadas & Co. Mumbai., 2017
7. Jhabvala, N.H.; Consumer Protection Act, C. Jamnadas & Co. Mumbai., 2017
8. Dr. Singh, Avtar; Company Law,17thed, Eastern Book Co. Lucknow, Bharat Law House, Delhi, 2018
9. Maheshwari, S.N. and S.K. Maheshwari; A Manual of Business Law, 2nd Edition, Himalaya Publishing House, 2015.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH201B	BUSINESS LAW	CO1	2	2	X	X	3	2	1	2	1	X	X	1		X	X
		CO2	2	2	X	X	3	2	X	2	X	X	X	X		X	X
		CO3	2	2	X	X	3	2	X	2	1	X	X	X		X	1
		CO4	2	2	X	X	3	2	X	2	X	X	X	X		X	X

Course Title/Code	**MANAGEMENT INFORMATION SYSTEMS/** ECH212B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	2-0-2
Credit	3
Course Objectives	Understand and apply core knowledge in Management Information Systems (MIS) Identify and analyze requirements for information systems Understand and apply design principles in Information Systems Understand and apply system development & project management principles Effectively evaluate technology alternatives to solve problems in an MIS context Effectively communicate to both business and IT professionals

	Course Outcomes (COs)	Mapping
CO1	Describe the role of information technology and information systems in business and Reproduce a working knowledge of concepts and terminology related to information technology.	Skill Enhancement
CO2	Interpret how to use information technology to solve business problems and the impact of information systems in society.	Employability

CO3	Analyze and synthesize business information and systems to facilitate evaluation of strategic alternatives.	Employability
CO4	To provide the theoretical models used in database management systems to answer business questions.	Skill Enhancement
equisites if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:
1.Kroenke, D. M., Gemino, A., & Tingling, P. "Experiencing MIS *(4th Canadian Edition)*. Toronto: Pearson., 201 6.
2.Poatsy, M. A., Cameron, E., Williams, J., & Grauer, R." Exploring Microsoft Office Access 2016*",* Comprehensive.Boston: Pearson Education Inc. , 2017.
3. Kenneth C Laudon & Jane P.Laydon, Management Information Systems,13ᵗʰed, ,Pearson Education Limited, 2014

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
	MANAGEMENT INFORMATION SYSTEMS	CO1	2	3	2	-	-	1	-	-	2	1	1	1	-	-	-
		CO2	3	3	3	2	-	1	-	-	2	1	1	1	-	-	-
		CO3	2	3	2	-	-	1	-	-	2	1	1	1	-	-	-
ECH212B		CO4	3	3	3	2	-	1	-	-	2		1	1	-	-	-

Course Title/Code	**RESEARCH METHODOLOGY /MCH217B**
Course Type:	Core (Departmental)
Course Nature:	Hard

L-T-P Structure	3-0-0
Credit	3

	Course Outcomes (COs)	Mapping
CO1	Identify and explain concepts which influence basic research, research process & research Proposal	**Skill Enhancement**
CO2	To develop an understanding of various research designs and techniques	**Skill Enhancement**
CO3	Demonstrate data collection methods and statistical methods, terminology used in research	**Employability**
CO4	Explain/Classify various data analytic skills and meaningful interpretation to data sets to solve business and research problems & report preparations	**Employability**
equisites if any)		

SECTION-A

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

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SECTION-B

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

SECTION-C

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

SECTION-D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH217B	RESEARCH METHODOLOGY	CO1	2	2	3	2	3	2	2	3	2	2	2	1	X	X	X
		CO2	2	2	3	2	3	2	2	3	2	2	2	1	X	X	X
		CO3	2	2	3	3	3	2	2	3	2	2	2	1	X	X	X
		CO4	3	3	3	3	3	2	2	3	2	2	2	1	X	X	1

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

Course Outcomes (COs)		Mapping
CO1	Understand the fundamental concepts and techniques of Operations management	Skill Enhancement
CO2	Examine various ways of managing the operations	Employability

CO3	To analyze the operational management issues and problems	**Employability**
CO4	Develop the ability to optimize the operations for business benefit	**Employability**
equisites if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH203B	OPERATIONS MANAGEMENT	CO1	2	3	3	2	2	1	3	3	1	2	x	1	x	1	1
		CO2	2	2	1	2	2	3	2	1	3	1	x	x	1	x	x
		CO3	3	3	2	2	3	2	1	3	2	3	1	x	1	x	1
		CO4	2	3	3	2	3	2	3	1	2	3	2	1	x	1	x

Course Title/Code	<mark>German-I FLS102</mark>
Course Type	Elective
L-T-P Structure	**2-0-0**
Credits	**0/0**
Course Objective	**Students will use listening and speaking skills in a variety of small and large group activities. Write basic descriptive paragraphs with clear topic sentences and supporting detail. Analyze reading segments on a diverse number of cultural topics. Learn the usage of appropriate grammatical structures which include beginning-level vocabulary, and verb conjugations.**
Prerequisites	Basic knowledge of grammatical structure, syntax, and vocabulary of English and/or Hindi

Course Outcomes (COs)	Mapping

CO1	Students will be able to exchange greetings and introduce themselves using formal or informal expressions	Skill Development
CO2	Students will be able to form simple sentences using new verbs and familiar vocabulary.	Skill Development
CO3	Students will be able to identify key details in short, highly-contextualized audio text dealing with a familiar topic and relying on repetition and extra linguistic support when needed.	Skill Development
CO4	Students will be able to discuss likes and dislikes, demonstrate simple conversations about familiar topics (e.g., greetings, weather, Family, Friends) with repetition when needed.	Skill Development
CO5	Capable to differentiate certain patterns of behavior in the cultures of the German-speaking world and the student's native culture.	Skill Development
CO6	Students will be able to describe various places, locations, themselves using simple sentences and vocabulary.	Skill Development
Prerequisites	Basic knowledge of grammatical structure, syntax, and vocabulary of English, and/or Hindi	

PART-A

Unit-1: Begrüßungen

1.1 Salutations/Greetings

1.2 Introduction

Unit-2: sich vorstellen und Zahlen

2.1 Introduction

2.2 Alphabets

2.3 Numbers 1-20

Unit-3: Berufe/ Pronomen

3.1 Personal pronouns

3.2 Hobbies and professions

<div align="center">

PART-B

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Unit-4: Café

4.1 Café related vocabulary and dialogues

4.2 Revision personal pronouns

Unit-5: Café dialog

5.1 Café related vocabulary and dialogues

5.2 Common verbs and their conjugations

Unit-6: Zeit und Monate

6.1 Time

6.2 Days

6.3 Months

Text Books/Reference Books:

1. **Studio D A1, Hermann Funk, 2011, Cornelson Publication**
2. **Tangaram Aktuell A1, Kursbuch & Arbeitsbuch, 2011, Hueber**
3. **Netzwerk, Stefanie Dengler, Paul Rusch et. Al, 2011, Klet**

<div align="center">

CO-PO Mapping

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Course Code	Course	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11

GERMAN FLS102	GERMAN-I	CO1	-	-	-	-	3	-	2	1	-	-	-
		CO2	-	-	-	-	3	-	1	2	-	-	-
		CO3	-	-	-	-	2	-	1	3	-	-	-
		CO4	-	-	-	-	2	-	3	1	-	-	-
		CO5	-	-	-	-	2	-	1	3	-	-	-
		CO6	-	-	-	-	2	-	1	3	-	-	-

Course Title/Code	Spanish-I FLS101
Course Type	Elective
L-T-P Structure	**2-0-0**
Credits	**0**
Course Objective	Students will use listening and speaking skills in a variety of small and large group activities. Write basic descriptive paragraphs with clear topic sentences and supporting detail. Analyze reading segments on a diverse number of cultural topics. Learn the usage of

	appropriate grammatical structures which include beginning-level vocabulary, and verb conjugations.
Prerequisites	Basic knowledge of grammatical structure, syntax, and vocabulary of English and/or Hindi

Course Outcomes (COs)		Mapping
CO1	**Students will exchange greetings, introductions and frame simple questions-answers using formal and informal expressions.**	**Skill Development**
CO2	**Students will make simple sentences using familiar vocabulary and verbs.**	**Skill Development**
CO3	**Students will learn cardinal-ordinal numbers and use the same in daily conversation.**	**Skill Development**
CO4	**Students will identify key details in a short, highly-contextualized audio text dealing with a familiar topic, relying on repetition and extra linguistic support when needed. Students will describe themselves, other people, places and objects in short discourse using simple sentences and basic vocabulary.**	**Skill Development**
CO5	**Demonstrate the ability to read critically, interpret analytically, speak persuasively, and write coherently about both visual and verbal texts produced in the Spanish-speaking world.**	**Skill Development**
CO6	**Students will be able to describe various places, locations, themselves using simple sentences and vocabulary.**	**Skill Development**
Prerequisites	**Basic knowledge of grammatical structure, syntax, and vocabulary of English, and/or Hindi**	

<div align="center">**PART-A**</div>

<div align="center">**Section 1: Introduction to Spanish and SER**</div>

1.1 Presentation on Spanish language

1.2 Greetings and goodbyes

1.3 Spanish letters

1.4 Introduction of verboSER

Section 2: Verb Ser, Nationality, Profession and Counting

2.1 Uses of verbo SER

2.2 Adjectives related to verbo SER.

2.3 Introduction of Nationality

2.4 Professions and vocabulary related to professions.

2.5 Counting till number 20.

<div align="center">**PART-B**</div>

Section 3: Articles, Interrogative and Estar

3.1 Introduction of Articles and Indefinite articles

3.2 Interrogatives

3.3 Introduction of VerboEstar

Section 4:Estar, Preposition, Tener and Self Introduction

4.1 Uses of Verbo ESTAR and adjectives related to it

4.2 Introduction of 'my house' vocabulary

4.3 Prepositions related to the positioning of an object

4.4 Self – introduction

Section 5 : Day, Month and Regular AR verb

5.1 Days

5.2 Months

5.3 Introduction to regular –AR verbs

Text Books/Reference Books:

1. ¡Ole!-Langers
2. ¡Uno, dos, tres…………

<u>CO-PO Mapping</u>

Course Code	Course	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
Spanish FLS101	SPANISH-I	CO1	-	-	-	-	2	-	3	2	-	-	-
		CO2	-	-	-	-	2	-	1	2	-	-	-
		CO3	-	-	-	-	2	-	3	2	-	-	-
		CO4	-	-	-	-	3	-	2	3	-	-	-
		CO5	-	-	-	-	3	-	2	3	-	-	-
		CO6	-	-	-	-	3	-	2	3	-	-	-

Course Title/Code	<mark>French-I FLS103</mark>
Course Type	Elective
L-T-P Structure	**2-0-0**
Credits	**0**
Course Objective	**Students will use listening and speaking skills in a variety of small and large group activities. Write basic descriptive paragraphs with clear topic sentences and supporting details. Learn the usage of appropriate grammatical structures which include beginning level vocabulary and verb conjugation.**
Prerequisites	Basic knowledge of grammatical structure, syntax, and vocabulary of English and/or Hindi

Course Outcomes (COs)		Mapping
CO1	**Students will be able to exchange greetings and introduce themselves using formal and informal expressions. They will be able to ask and answer simple questions.**	**Skill Development**
CO2	**Usage of basic vocabulary that can be used to discuss everyday life and using simple sentences and familiar vocabulary.**	**Skill Development**
CO3	**Describe themselves, other people, familiar places and objects in short discourse using simple sentences and basic vocabulary.**	**Skill Development**
CO4	**Present basic information about familiar situations and topics of interests.**	**Skill Development**
CO5	**Justify opinions using equivalents of different verbs.**	**Skill Development**

CO6	Describe various places, locations, themselves using simple sentences and vocabulary.	Skill Development
Prerequisites	Basic knowledge of grammatical structure, syntax, and vocabulary of English and/or Hindi.	

PART-A

Unit - Saluer et épeler l'alphabet

1.1 Les Salutations & forms of politeness

1.2 Alphabets

Unit 2- Usage de Vous et de Tu

2.1 Taking leave expressions

2.2 Les pronoms sujets

2.3 Basic Questions

Unit 3- Présentez-vous

3.1 Les verbes ER

3.2 Self introduction

3.3 Décrivez votre ami(e)

PART-B

Unit 4- Identifier un nombre, compter

4.1 Les noms

4.2 Verbes Avoir, Etre, Aller & Faire

4.3 Les nombres

Unit 5- Demander/ donner l'explications

5.1 Les articles define et indefini

5.2 Les mois de l'annee

5.3 Les jours de la semaine

Unit 6- Parler des saisons et demander l'heure

6.1 Time

6.2 Weather

6.3 Unseen Passage

Text Books/Reference Books/ Suggested Readings:

1. **Alter Ego Level One Textbook, Annie Berthet, Catherine Hugot, Hachette Publications**

2. **Apprenons Le Francais II & III, Mahitha Ranjit, 2017, Saraswati Publications**

Weblinks:

www.bonjourfrance.com

www.allabout.com

CO-PO Mapping

Course Code	Course	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
FLS103	FRENCH-I	CO1	-	-	-	-	3	-	2	1	-	-	-
		CO2	-	-	-	-	3	-	2	-	-	-	-

	-	-	-								
CO3	-	-	-		2	-	1	3	-	-	-
CO4	-	-	-	-	2	-	-	3	-	-	-
CO5	-	-	-	-	3	-	2		-	-	-
CO6	-	-	-	-	3	-	1	2	-	-	-

Course Title/Code	**ENVIRONMENTAL SCIENCES /CHH137**
Course Type:	Core(Allied)
Course Nature:	Hard
L-T-P Structure	4-0-0
Credit	4
Course Objectives	Students shall be able to identify the areas of environmental degradation and control measures

	Course Outcomes (COs)	Mapping
CO1	Understand and explain the multidisciplinary dimensions of environmental issues	Skill Enhancement
CO2	Understand the primary environmental problems and suggest potential solutions	Employability
CO3	Understand and explain about the various groups of plants and animals and their interactions in different ecosystems	Employability
CO4	Appreciate the principles governing the interactions between social and environmental factors	Employability
equisites if any)		

SECTION A

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

Natural resources and associated problems.

a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
g) Role of an individual in conservation of natural resources.
h) Equitable use of resources for sustainable lifestyles.

SECTION B

Ecosystems: Concept of an ecosystem**,** Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem., Ecological succession., Food chains, food webs and ecological pyramids, Introduction, types, characteristic features, structure and function of the following ecosystem :-
   a. Forest ecosystem
   b. Grassland ecosystem
   c. Desert ecosystem
   d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

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

Environmental Pollution, Definition, Cause, effects and control measures of :-
   a. Air pollution
   b. Water pollution
   c. Soil pollution
   d. Marine pollution
   e. Noise pollution
   f. Thermal pollution
   g. Nuclear hazards

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

Social Issues and the Environment

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

SECTION D

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

References:

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

ENVIRONMENTAL SCIENCES PRACTICAL –FIELD WORK

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

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CHH137	ENVIRONMENTAL SCIENCES	CO1	1	2	1	x	3	2	2	1	2	x	2	1	x	x
		CO2	1	2	1	1	1	2	2	1	1	x	2	2	x	x
		CO3	2	2	1	1	1	3	1	2	1	x	2	2	x	x
		CO4	2	1	1	2	2	2	x	2	1	x	2	3	x	x

Course Title/Code	**FINANCIAL SERVICES/MCH234B**
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course objectives	To familiarize students to nature and scope of various financial services

	Course Outcomes (COs)	Mapping
CO1	To familiarize students to nature and scope of various financial services	Employability
CO2	To understand the functions and method of floatation of new issues	Employability
CO3	To understand the role of SEBI and Depository participants in Financial Services	Employability
CO4	To be able to formulate financial planning with understanding of different financial services.	Skill Enhancement
equisites if any)		

SECTION – A

Functions of Financial System, Financial Assets, Financial Intermediaries, Financial Markets   Money Market, Hire -Purchase and Leasing, Venture Capital & its Features, Difference between Discounting

SECTION – B

New Issue Market (I.P.O), Functions of new issue market, Method of floating issues,   Secondary market, B.S.E, N.S.E. Listing, Dematerialization of Shares, Listing of Securities, Share pricing

SECTION - C

Securities & Exchange Board of India (SEBI),   Depositing system,   Objectives of Depositors,   Listing of Securities
SECTION - D

Factoring, Forfeiting, Credit rating in India, Functions of credit rating Agencies, Mutual Funds, Management and Products, Micro Finance,

erences:

1. Khan, M.Y., Financial Services, Tata McGraw Hill, New Delhi.

2. Pathak, Indian Financial System, Pearson Education.
3. Khan, M.Y., Indian Financial System, Tata McGraw Hills, New Delhi
4. Machiraju, H.R., Indian Financial System, Vikas Publishing House.
5. Machiraju, H.R., Working of Stock Exchange in India, New Age Publication.
6. Shrivastava, R.M., and Nigam, Divya, Management of Indian Financial Institutions, Himalaya Publishing House.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
		CO1	3	3	2	2	3	2	1	3	2	3	3	2		1	1
	FINANCIAL	CO2	3	3	2	2	3	2	1	3	2	3	3	2		1	1
	AL	CO3	2	2	2	2	3	3	1	3	2	3	3	2		1	1
MCH234B	SERVICES	CO4	2	3	3	3	2	1	1	3	2	2	3	2		1	1

Course Title/Code	**Management Accounting/ MCH239B**
Course Type:	Core(Allied)
Course Nature:	Hard
L-T-P Structure	3-0-0-0
Credit	3
Course Objectives	Students shall be able to understand the concept of Management Accounting

	Course Outcomes (COs)	Mapping
CO1	To enable students to perform ratio analysis	Skill Enhancement
CO2	To understand the concept of budget and budget control	Employability
CO3	To perform Costing and cost structure	Employability
CO4	To calculate the break even analysis	Employability
equisites if any)		

Section-A

Introduction: Nature, Scope and Importance of Management Accounting; Difference between Financial Accounting and Management Accounting; Difference between Cost Accounting and Management Accounting; Cost Control, Cost Reduction, and Cost Management. Financial statement Analysis: Common-size financial statements, trend percentage analysis, Ratio Analysis: Financial analysis of Companies.

Section- B

Budgeting and Budgetary Control, Concept of Budget and Budgetary Control; Objectives,

Merits and Limitations of Budget Administration; Types of Budget: Fixed and Flexible Budgets,

Zero-Base Budget, Program and Performance Budget.

Section –C

Standard Costing, Concept of Standard Cost and Standard Costing; Advantages, Limitations, and Application; Variance Analysis: Calculation of Material Variances, Labour Variances, and overhead Variances, Disposition of Variances.

Section-D

Marginal Costing and Decision-Making- Concept of Marginal Costing, Differential Costing and Absorption Costing, Break-Even Analysis, Use of above Costs in Decision-Making; Make or Buy, Change of Product-Mix, Pricing and Determination of Shut-Down Point. Responsibility Accounting- Concept and Approaches to Responsibility Accounting.

Suggested Books & Readings

1. Charles T. Horngren, Gray L. Sundem, and William O. Stratton, Introduction to Management Accounting, 14th edition, Prentice-Pearson Education, Delhi, 2008

2. Khan, M.Y., and P.K. Jain, Management Accounting, 6 edition, Tata McGraw-Hill, New Delhi, 2009

3. Richard M. Lynch and Robert W. Williams, Accounting and Management: Planning and Control, 3rd edition Tata McGraw-Hill, New Delhi, 2005

4. Anthony, Robert N., David f. Hawkins, and Kenneth A. Merchant, Accounting: Text and Cases, 13th edition, Tata McGraw-Hill, New Delhi, 2010

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH239B	Management	CO1	3	3	2	2	3	2	1	3	2	3	3	2		1	1
		CO2	3	3	2	2	3	2	1	3	2	3	3	2		1	1

	Accounting	CO3	2	2	2	2	3	3	1	3	2	3	3	2		1	1
		CO4	2	3	3	3	2	1	1	3	2	2	3	2		1	1

Course Title/Code	INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT/MCH205B
Course Type:	ELECTIVE
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	This course aims at providing a clear understanding of the changing domestic and global investment scenario in general and Indian capital market in particular.

	Course Outcomes (COs)	Mapping
CO1	To develop a practical understanding of the financial markets and investment avenues.	Skill Enhancement
CO2	To classify different tools and techniques of Securities Analysis i.e. fundamental analysis and technical analysis.	Employability
CO3	To identify theories of portfolio construction.	Employability
equisites if any)	To explain the portfolio management process and will be able to learn the techniques of portfolio revision.	Employability

SECTION A
A quick review of basic concepts; Overview of Investments: Investment objectives; Investment Environment; Investment Process; Common Errors in Investment Management; Introduction of Primary Markets and interrelationship with secondary markets; Investment Alternatives, Risk and Return in the Context of Portfolio, Capital Asset Pricing Model

SECTION B
Valuation of Securities: Valuation of Fixed Income Securities, Valuation of Common Stock

SECTION C
Markowitz's Risk-Return Optimization; Optimal Portfolio; Efficient Market Hypothesis; Overview of Fundamental & Technical Analysis

SECTION D

Managed Portfolios and Performance Evaluation: Sharpe's, Treynor's, Jensen's and Fama's Performance Measures; Portfolio Revision: Portfolio Rebalancing and Upgrading

References:
13. Chandra, Prasanna, "Investment Analysis & Portfolio Management", 3e. Tata **McGraw-Hill** Education Pvt. Ltd, 2012
14. Fischer D E; Jordan R J, "Security Analysis and Portfolio Management", 6e, Prentice Hall, 2008.
15. Fuller R J &Farrel J, "Modern Investments and Security Analysis, "McGraw Hill, 1987

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH205B	INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT	CO1	2	3	1	2	2	X	2	3	X	1	2	3		1	1
		CO2	2	1	3	2	2	X	2	3	X	1	2	3		1	1
		CO3	3	2	1	2	2	X	1	2	X	1	2	3		1	1
		CO4	2	3	1	2	3	X	2	2	X	1	2	3		1	1

Course Title/Code	<mark>**FAMILY BUSINESS GOVERNANCE/MCH241B**</mark>
Course Type:	Elective (Departmental)
Course Nature:	Hard
Credit	3
L-T-P Structure	3-0-0
Course Objectives	Describe principles and processes of family business governance

	Course Outcomes (COs)	Mapping
CO1	Describe principles and processes of family business governance	Employability
CO2	Understand and explain the governance structure and processes that organize the family system	Skill Enhancement
CO3	Understand and explain the contribution of Professional board of Directors in	Skill Enhancement

	the family business governance	
CO4	Identify the techniques that smoothen the communication between family and board that ensure overlapping of family and business governance	**Employability**

SECTION A

Introduction to family business governance- Definition, Meaning, and importance, challenges and risks to family business governance, Purpose and goals of good governance, family member roles in governance, key governance issues in ownership development stages, Corporate governance v/v family governance Structure / Model of Family business governance , Principles of family business governance, theories of corporate governance in family business– agency theory, and stewardship theory .

SECTION B

Organizing the family & Family governance

Meaning & Need for family governance, key concerns of family governance, role of active owners, , Family governance institutions- Family Constitution- Meaning, contents of family constitution, setting a family policy , family office, Family meetings, Family assembly, family council & its purpose, family agreements, understanding family conflicts, family governance for conflict resolution

SECTION C

Organizing the board & Corporate governance

Phases of family ownership and governance activities, types of ownership,Role and responsibilities of the board of directors, benefits of an active board, family decisions on creating boards, the board and family values, the board and commitment of family ownership, board and business strategy

SECTION D

Overlapping of Family and Corporate Governance- Board v/s family council participation and responsibilities, board and family Expectations, chief family officer, managing communication & boundaries between family and board, evolution of family business governance systems, family philanthropy, family foundation

References: ·

1.Poza, E. J. & M. S. Daugherty (2014). Family Business, 4th edition (International Edition), South-Western Cengage Learning

2. Ibrahim, B. and W. Ellis. (2004). Family Business Management: Concepts and Practice, Kendall Hunt, Second Edition.

3. Hoy, F. & P. Sharma (2010). Entrepreneurial Family Firms. Prentice-Hall, Pearson Education. · Kets de Vries, F.R. & Carlock, R.S., with E. Florence-Treacy (2007). Family Business on the Couch: A Psychological Perspective. Wiley.

4. Nordqvist, M. and Zellweger, T. (2010). Transgenerational Entrepreneurship: Exploring Growth and Performance in Family Firms across Generations. Cheltenham, Gloucestershire, UK, Edward Elgar Publishing.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH241B	FAMILY BUSINESS GOVERNANCE	CO1	3	3	1	1	3	3	2	2	2	2	3	2		1	2
		CO2	3	3	1	1	3	3	3	2	2	2	3	2		1	2
		CO3	3	3	1	1	3	3	3	2	2	2	3	2		1	2
		CO4	3	2	1	1	2	3	2	2	2	2	3	2		1	2

Course Title/Code	BUSINESS MODELLING/MCH242B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3

Course Objectives	The main objective of the course is to familiarize you with knowledge, concepts and tools that are needed to diagnose and evaluate existing business models as well as to analyze, design and implement novel business models. The concepts that form the basis for the course are deeply anchored in state-of-the-art research and practice on the subject of business model innovation strategy. The integrative framework that we will learn addresses both the content (e.g., the key components of a business model) as well as the process of business model design.

SECTION A

Introduction to Business Model Innovation Strategy: Why Do Business Models Matter? What is a Business Model? Approaches Towards Defining Business Models, The Business Model as an Activity System, The "What, How, Who & Why" Framework - The What Dimension - The How Dimension - The Who Dimension - The Why Dimension , Implications of the Framework , Value Creation vs. Value Appropriation in Business Models.

SECTION B

Business Model Innovation: Adopting a Business Model Mindset and why it is needed, Leadership actions to foster a Business Model Mindset, What is business model innovation, A framework for business model innovation Measuring business model innovation, The Pros and Cons of business model innovation.

SECTION C

Strategic Design Process of Business Model Innovation: Why is a design perspective relevant to business model development, What is Design in the context of Business models, Business Model Strategic Design Drivers, Robust Business Model Design, The Business Model Design Process, Building a business model innovation capability.

SECTION D

Managing the Organizational Challenges of Business Model Implementation in Startups and in Established Firms: The roles of governance and leadership in business model implementation Revenue models the strategic implications of business model innovation in the digital age and how to develop a business model innovation strategy and Revenue models for business model implementation.

References:

·   **Case: HBS Case Studies #618051 and #619079 (2019) JD: Envisioning the Future of Retail (A and B) by Feng Zhu and Shirley Sun**

·   **Case: HBS Case Study #W19506 (Ivey, 2019) NIO: Developing a Business Model in China**

·   **Case: HBS Case Study #812077 (2011, rev. 2012) Rent the Runway**

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
		CO1	1			1	2	2		3	3			2			

MCH24 Business

2B	Modeling	**CO2**	1	1			2	2		3	3						
		CO3	1	1			1	1	3	3	3	3					
		CO4					1	2	1	1		3					

Course Title/Code	**CLINICAL SERVICES /MCH210B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Develop a working knowledge of clinical practices of Hospitals related to OPD, Operation Theatre, and other services .

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamentals of Clinical Services	**Skill Enhancement**
CO2	To understand the working of different Clinical Departments	**Employability**
CO3	To understand the interrelationships between all the Clinical Services in Hospitals.	**Employability**
CO4	To explain the staff planning in Clinical Services in a hospital	**Employability**
Prerequisites (if any)		

SECTION-A

Out Patient Department Services Ward / indoor Services

SECTION-B

Operation Theatre services

SECTION-C

Intensive care Unit; Nursing services

SECTION-D

Health Promoting Hospital Emergency Department

References:

Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013
BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
		CO1	3	2	2	x	1	2	2	1	2	x	3	2		2	x
		CO2	3	2	2	x	1	1	1	1	2	x	3	2		2	x
	CLINICAL	CO3	2	3	2	x	1	1	1	1	2	x	2	3		1	x
MCH210B	SERVICES	CO4	3	2	2	x	1	2	2	1	2	x	3	2		1	x

Course Title/Code	**PLANNING AND DESIGN OF HOSPITALS**/MCH211B
Course Type:	Core
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To develop working knowledge of Hospital planning and design from multiple stakeholders and disciplinary perspectives

CO1	To understand the basic concepts in planning & designing of a hospital	**Skill Enhancement**
CO2	Have clarity on the difference between planning & designing of different types of hospitals (teaching, Specialty, disabled friendly)	**Skill Enhancement**
CO3	To get a basic understanding of different standards and their importance & the tools for Project Management.	**Employability**
CO4	To analyze the pros and cons in a healthcare facility design	**Skill Enhancement**

SECTION A

Building a teaching hospital , Challenges in setting up a tertiary hospital

SECTION B

Hospital administration

SECTION C

Role of planning & designing in Hospital Management

SECTION D

Designing disabled - friendly hospitals - need of the hour

References:

16. Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013
17. BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH211B	PLANNING AND DESIGN OF HOSPITALS	CO1	2	2	1	x	1	2	1	1	2	1	3	2	2	2	x
		CO2	2	2	1	x	1	2	1	1	2	1	3	2	2	2	x
		CO3	2	2	1	x	1	2	1	1	2	1	3	2	2	2	x
		CO4	2	2	1	x	1	2	1	1	2	1	3	2	2	2	x
		CO5	2	2	1	x	1	2	1	1	2	1	3	2	2	2	x

Course Title/Code	**EPIDEMIOLOGY MCH237B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3

Course Objectives	Students will be able to distinguish the roles and relationships between epidemiology and biostatistics in the prevention of disease and the improvement of health.

	Course Outcomes (COs)	Mapping
CO1	To introduce the basic principles and methods of epidemiology	**Skill Enhancement**
CO2	Demonstrate a basic understanding of epidemiologic methods and study design.	**Employability**
CO3	To provide a structured method for organizing and analyzing raw data	**Employability**
CO4	Combine appropriate epidemiological concepts and statistical methods.	**Skill Enhancement**

SECTION A

Types of Epidemiology a. Prospective and Retrospective b. Descriptive (person, place, time) c. Analytic (cause and risk and protective factors);Uses of Epidemiology a. Determinants of Health (Healthy People 2010) b. Historical study of health status in populations c. Community assessment to identify assets and needs d. Environmental health hazards and exposures e. Factors influencing health beliefs and practices f. Individual risks and primary, secondary, and tertiary preventive strategies g. Disease and health presentations and precursors (e.g. tobacco and COPD) h. Study of causation and causal inference

SECTION B

Epidemiological Models and Strategies: a. Epidemiological triad, web of causation, and health promotion models b. Epidemiological study designs c. Case series, single or multiple d. Case control studies e. Cohort studies f. Random and systematic error g. Subject selection

SECTION C

Natural History of Disease: a. Case definition b. Chain of causation c. Surveillance and investigation d. Prevention and Control (NNT)
Genomics: Gene precursors to health and illness b. Association with conditions

SECTION D

Epidemics/Pandemics a. Emerging infectious diseases b. Globalization of disease

REFERENCES

Gordis, L. (2004). *Epidemiology.* Third edition. Philadelphia: Elsevier Saunders. (The second edition is also acceptable.)

Pagano, M. and Gauvreau, K. (2000). *Principles of Biostatistics.* Belmont, CA: Wadsworth.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH237B	EPIDEMIOLOGY	CO1	3	2	2	2	1	2	2	1	2	X	1	1	1	1
		CO2	3	2	2	2	1	2	2	1	2	X	1	1	1	1
		CO3	3	2	2	2	1	2	2	1	2	X	1	1	1	1
		CO4	2	2	1	1	1	2	2	1	2	X	1	1	1	1

Course Title/Code	**TOTAL QUALITY MANAGEMENT/MCH208B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0-0
Credit	3
Course Objectives	To understand Quality of design, control and identify non-conforming product design, control and identify non-conforming products

	Course Outcomes (COs)	Mapping
CO1	To understand Quality of design, control and identify non-conforming product design, control and identify non-conforming products	Skill Enhancement
CO2	To understand Quality Function Deployment (QFD),(Total Productive Maintenance) TPM	Employabiity
CO3	To analyze the Failure Mode and Effects Analysis (FMEA)/FTA	Employability
CO4	Analyze Quality Costs and Audit Marketing aspects of total quality, Total Quality of Services, Total Quality and Environment and Safety	Employability

equisites (if any)	

SECTION A

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

SECTION B

Measurement of quality- Costs of quality, Tools and techniques for quality improvement,

Statistical process control, Quality improvement techniques in service industries.

Theory of Acceptance Sampling, Statistical Process Control, Process Capability

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

SECTION C

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

SECTION D

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

References:

1. Besterfield, D. H., Besterfield-Michna, C., Besterfield, G. H., & BesterfieldSacre, M. (2006). Total quality management (3rd ed.). New Delhi: Pearson Education.

2. Dale, B. G. (2003). Managing quality. UK: Blackwell Publishing.

Faculty of Management Studies, University of Delhi

3. De Feo, J. A., & Barnard, W. W. (2005). Juran's institute: six sigma breakthrough and beyond: Quality performance breakthrough methods. New Delhi: Tata McGraw Hill.

4. IS/ISO 9001:2000. (2000). New Delhi: Bureau of Indian Standards.

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH208B	TOTAL QUALITY MANAGEMENT	CO1	3	3	3	2	2	1	1	2	1	1	3	1	2	x	x
		CO2	3	3	2	2	1	1	1	2	1	1	3	1	2	x	x
		CO3	3	2	3	2	1	1	1	1	1	1	3	1	2	x	x
		CO4	3	2	3	2	1	1	1	1	1	1	3	1	2	x	x

Course Title/Code	WAREHOUSE MANAGEMENT/ MCH209B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3

	Course Objectives	Understand the concept and application of warehouse management in logistics industry

	Course Outcomes (COs)	Mapping
CO1	Define and explain all the important features of warehouse management	**Skill Enhancement**
CO2	Explain the Warehousing process with relevant examples from industry	Employability
CO3	Analyze the trends in Warehousing, and apply them to explain the future of warehousing	Employability
CO4	Explain the use of various storage and handling equipments in warehousing	Employability

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH209B	WAREHOUSE MANAGEMENT	CO1	1	2	2	X	3	2	X	X	X	X	1	1	1	1
		CO2	3	X	3	X	2	2	X	X	2	X	2	2	3	2
		CO3	X	X	X	2	2	1	3	X	2	X	2	2	1	X
		CO4	X	X	X	3	2	3	2	2	X	3	2	2	3	X

Course Title/Code	**Python Programming/ MCH 244B**
Course Type:	**ELECTIVE**
Course Nature:	**Hard**
Credit	3
L-T-P Structure	**3-0-0**

Course Objectives	The purpose of this course is to help students gain much needed knowledge pertaining to Python Programming, to prepare them for the advanced modules such as ML. Python scripting is user friendly and is the most used language in industry when it comes to designing and scripting applications with respect to Emerging Technologies.

	Course Outcomes (COs)	Mapping
CO1	To impart understanding of why python is a useful scripting language.	**Skill Enhancement**
CO2	To impart understanding of Types, Operators and Expressions of python	**Skill Enhancement**
CO3	To impart understanding of decision control, Data structures and Control flow for implementing python programs.	**Skill Enhancement**
CO4	To impart the knowledge of OOP and Exception handling in python.	**Skill Enhancement**
equisites if any)		

Section A

Introduction History of Python, Need of Python Programming, Applications Basics of Python Programming Using the REPL(Shell), Running Python Scripts, Variables, Assignment, Keywords, Input-Output, Indentation.

Types, Operators and Expressions

Types - Integers, Strings, Booleans; Operators- Arithmetic Operators, Comparison (Relational) Operators, Assignment Operators, Logical Operators, Bitwise Operators, Membership Operators, Identity Operators, Expressions.

Section B

Data Structures and Control Flow Lists, Operations, Slicing, Methods, Tuples, Sets, Dictionaries, Sequences, Comprehensions, Conditional blocks using If, Else and El-if, For Loop, for loop using Ranges, String, list and Dictionaries, While Loop, Loop Manipulation using Pass, Continue, Break and Else, Conditional and Loops Block.

Section C

Functions Modules and Packages Defining Functions, Calling Functions, Passing Arguments, Keyword Arguments, Default Arguments, Variable-length arguments, Anonymous Functions, Function Returning Values, Scope of the Variables in a Function - Global and Local Variables. Creating modules, NameSpacing, Introduction to PIP, Installing Packages via PIP, Using Python Packages.

Section D

Object Oriented Programming & Exception Handling Classes, Self-Variable, Methods, Constructor Method, Inheritance, Overriding Methods, Data Hiding, Difference between an Error and Exception, Handling Exception, Try Except Block, Raising Exceptions, and User Defined Exceptions.

References:
18. R.Nageswara Rao, 2018, Core Python Programming, Dreamtech.
19. John Hearty, 2016, Advanced Machine Learning with Python, Packt.
20. Jake VanderPlas, 2016, Python Data Science Handbook: Essential Tools for Working with Data, O'Reilly.
21. Mark Lutz, 2010, Programming Python, O'Reilly.

22. Tim Hall and J-P Stacey, 2009, Python 3 for Absolute Beginners, Apress.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH244B	Python Programming	CO1	2	2	X	X	3	2	1	2	1	X	1	2		1	2
		CO2	2	2	X	X	3	2	X	2	X	X	2	1		2	2
		CO3	2	2	X	X	3	2	X	2	1	X	2	1		1	X
		CO4	2	2	X	X	3	2	X	2	X	X	2	2		1	1
		CO5	2	2	X	X	3	2	1	2	1	X	1	2		1	2

Course Title/Code	**Structured Query Language (SQL) / MCH245B**
Course Type:	Elective
Course Nature:	Hard
L-T-P Structure	2-0-2
Credit	3
Course Objectives	The purpose of this course is to familiarize students with various concept of Database Management System and hands-on practice using Structured Query Language.

	Course Outcomes (COs)	Mapping
CO1	Conceptualize and understand the basics of DBMS and SQL Programming.	**Skill Enhancement**
CO2	Articulate and employ the use of Normalization to remove redundancy in data.	**Skill Enhancement**
CO3	Classify the different types of Locking Protocols and perform Transaction Management.	**Skill Enhancement**

CO4	Understand No-SQL Data Modeling and employ the use of MongoDB for No-SQL Data Administration.	Skill Enhancement

Section A
Introduction

Introduction-Database System Applications, Purpose of Database Systems, Views of Data, Data Abstraction, Instances and Schemas, Data Models, Database Languages, DDL, DML, Database Architecture, Database Users and Administrators, Database Design, ER Diagrams, Forms of Basic SQL Query, Nested Queries, SQL Operators, NULL values, Outer Joins, Triggers, Views.

Section B
Normalization

Problems Caused by Redundancy, Decompositions, Functional Dependencies, Normal Forms, First, Second, Third Normal forms, BCNF, Properties of Decompositions, Lossless Join Decomposition, Dependency Preserving Decomposition, Multi Valued Dependencies, Fourth Normal Form, Join Dependencies, Fifth Normal Form.

Section C
Transactions

Transaction Management, Transaction Concept, Transaction State, Implementation of Atomicity and Durability, Concurrent, Executions, Serializability, Recoverability, Implementation of Isolation, testing for serializability, Concurrency Control, Lock, Timestamp Based Protocols, Validation Based Protocols, Recovery, Failure Classification, Storage Structure, Atomicity, Log Based Recovery, Remote Backup Systems.

Section D
No SQL

Overview of No SQL, Types of No SQL Databases, No SQL Storage Architecture, CRUD Operations in MongoDB, Querying, Modifying and Managing No SQL Databases, Indexing and Ordering, Migrating from RDBMS to No SQL, No SQL in Cloud, Database Administration.

References

1. Guy Harrison, 2015, *Next Generation Databases: No SQL and Big Data*, Apress.
2. Ramez Elmasri, Shamkat B.Navathe, 2013, *Database Systems*, Pearson.
3. Pramod J. Sadalage, Martin Fowler, 2012, *No SQL Distilled,* Addison Wesley.
4. A.Silberschatz, H.F. Korth, S.Sudarshan, 2006, *Database System Concepts*, McGraw Hill.
5. Raghurama Krishnan, Johannes Gehrke, 2003, *Database Management Systems*, McGraw Hill.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2

MCH245B	SQL																
		CO1	2	2	X	X	3	2	1	2	1	X	1	2		1	2
		CO2	2	2	X	X	3	2	X	2	X	X	2	1		2	2
		CO3	2	2	X	X	3	2	X	2	1	X	2	1		1	X
		CO4	2	2	X	X	3	2	X	2	X	X	2	2		1	1

SEMESTER - 4									
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH218B	SERVICES MARKETING	DMC	HARD	CORE	3	0	0	3	3
MCH215B	SUPPLY CHAIN MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
MCH236B	CSR And Sustainable Development	DMC	HARD	CORE	3	0	0	**3**	3
ELECTIVE									
FINANCE AND ACCOUNTS									
MCH219B	MANAGEMENT OF BANKING AND FINANCIAL INSTITUTIONS	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH235B	CORPORATE ACCOUNTING	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH240B	DIGITAL FINANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH216B	PERFORMANCE AND COMPENSATION	DMC	HARD	ELECTIVE	3	0	0	3	3

	MANAGEMENT SYSTEMS								
CSH216B	RELATIONAL DATABASE MANAGEMENT SYSTEMS	ECE	HARD	ELECTIVE	2	0	2	4	3
MCH221B	SUMMER INTERNSHIP	DMC	SOFT	CORE	0	0	8	8	4
Entrepreneurship & Family Business Specialization									
MCH222B	MANAGING ENTREPRENEURIAL GROWTH AND STRATEGY	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH238B	APPLIED ENTREPRENEURSHIP PROGRAM	DMC	SOFT	Elective	1	0	2	3	3
MCH 225B	APPLIED ENTREPRENEURSHIP PROJECT	DMC	NTCC	Elective	0	0	12	**12**	6
Health Care Management Specialization									
MCH226B	MATERIAL & INVENTORY MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH227B	HEALTHCARE INFORMATION SYSTEM	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH228B	MANAGEMENT OF MEDICATION	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH229B	HEALTHCARE & HRM	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH243B	Healthcare Industry Project	DMC	HARD	CORE	0	0	12	12	6
MCH231B	PROJECT MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3

MCH23 2B	FREIGHT TRANSPORT MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH23 3B	APPLIED OPERATIONS MANAGEMENT PROJECT	DMC	NTCC	ELECTIVE	0	0	12	12	6
Business Analytics Specialization									
MCH24 6B	Operation Research	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH24 7B	SAS & Tableau	DMC	HARD	ELECTIVE	0	0	4	4	2
MCH216 B	PERFORMANCE AND COMPENSATION MANAGEMENT SYSTEMS	DMC	HARD	ELECTIVE	3	0	0	3	3
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

BBA- Fourth Semester

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

Course Outcomes (COs)		Mapping
CO1	To understand the basics of Services, designing of services, service blueprinting and other related topics.	Skill Enhancement
CO2	To give the students an insight into the 7 Ps of Services Marketing with its practical applicability	Employability
CO3	To understand the dynamics of Services Marketing, its demand and supply through capacity planning and Internal & External Marketing	Employability
CO4	To study the quality gaps, the factors contributing to such gaps and its remedies, buyer's behaviour and impact of social and cultural variables on consumption decisions	Employability

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

Delivering Quality Service:Causes of Service – Quality gaps, the customer expectations versus perceived service gap. Factors and Techniques to resolve this gap Customer Relationship Management. Gaps in Services – Quality standards, factors and solutions – The service performance gap – Key factors and strategies for closing the gap, External communication to the customers – The promise versus delivery gap – Developing appropriate and effective communication about service quality.
Marketing Of Service With Special Reference To:1. Financial Services 2. Health Service 3.Hospitality Services including travel, hotels and tourism 4. Professional Service 5.Public Utility Services 6.Educational Services

References:

1   Joachen Wirtz,Patricia Chew and Christopler Lovelock, Essentials of Services Marketing, 2nd ed, Pearson Education, South Asia Ltd, 2013.
2   Adrian Payne, The Essence of Marketing New Delhi, Prentice Hall of India Pvt. Ltd., 2001.
3   Chistopher lovelock, Services Marketing, 4th edn, Pearson Education Asia, 2001.

4   Christopher Lovelock and Joachen Wirtz, Services Marketing: People, Technology, Strategy, Prentice Hall, 7th edition, 2011

5   K. Douglas Hoffman, John. E.G. Bateson, Essentials of Service Marketing, 2nd edn, Thomson – South Western , 2002.

6   Helen Woodroffe – Services Marketing, Macmillan India Ltd., 1997.

7   S.M. Jha, Services Marketing, New Delhi Himalaya Publishing House, 2000.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH218B	SERVICES MARKETING	CO1	2	2	2	2	2	2	2	2	2	2	2	2		2	2
		CO2	2	2	2	2	2	2	2	2	2	2	2	2		2	2
		CO3	2	2	2	2	2	2	2	2	2	2	2	2		2	2
		CO4	2	2	2	2	2	2	2	2	2	2	2	2		2	2

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

Course Outcomes (COs)		Mapping
CO1	To understand the basic concepts of SCM	Employability
CO2	To understand concepts and application how to develop efficient supply chain	Employability

			Employability
CO3	To analyze and apply the decision making in SCM		Employability
CO4	To understand and apply Procurement and Outsourcing in SCM		Employability

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH215B	SUPPLY CHAIN MANAGEMENT	**CO1**	1	1	1	1	1	1	1	1	1	1	1	1		2	2
		CO2	3	3	3	3	3	3	3	3	3	3	3	3		2	2
		CO3	X	X	X	X	X	X	X	X	X	X	X	X		2	2

| | | CO4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 |

Course Title/Code	**CORPORATE SOCIAL RESPONSIBILITY & SUSTAINABLE DEVELOPMENT MCH236B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
COURSE OBJECTIVES:	The objective of this course is to expose the students to basic concepts of Sustainability & Corporate Social responsibility, in order to initiate ideas, techniques, procedures and practices in the mentioned field.

	Course Outcomes (COs)	Mapping
CO1	To familiarize the students with context & concept of sustainable development, and its dimensions on ground	Employability
CO2	To inculcate an in-depth understanding of corporate social responsibility, and its role in ushering in sustainable development	Skill Enhancement
CO3	To correlate the alignment of CSR & development in organizational context, and understand the strategy, leadership & motivation therein	Employability
CO4	To familiarize students with coding & quality standards of CSR, and evaluating & reporting performance of CSR initiatives	Skill Enhancement

Section A

Sustainable Development: Basic Concepts- Perspectives & challenges of sustainability. **Stakeholders of sustainable development**- SDGs, Issues in sustainable development policies. Sustainable Development and social exclusion and impact among socially excluded and marginalized sections: Dalits, Adivasis, Religious Minorities, Women, Transgender, Differently Abled, HIV-Aids victims, Migrants and other marginalized groups.

Section B

Corporate Social Responsibility- Definition, concept, linkages to sustainable development Growth of CSR-historical & contemporary perspectives, National & International scenario. Factors influencing growth of CSR in India- ideological, socio-economic, legal & environmental perspectives Government initiatives for promoting CSR Impact of globalization & liberalization on CSR initiatives

Section C

CSR & Development: -CSR activities–nature, types, impact on development programmes- CSR & development organizations–relationships, functioning & impact on organizational functioning Stakeholders' participation & perspectives about CSR. CSR Strategy and Leadership.Corporate motivations & Behaviour for CSR – Programmes & initiatives, factors influencing national & international perspectives

Section D

Standards and Codes (ISO – 14001, OHSAS – 18001- SA – 8000, OECD Guidelines for Multinational Companies, Global Compact, AA – 1000, BS / ISO Guideline on CSR Management ISO-26000) Evaluating & reporting performance of CSR initiatives - Social accounting, environment audits and performance measurement

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH236 B	CORPORATE SOCIAL RESPONSIBILITY & SUSTAINABLE DEVELOP	CO1	1	2	3	3	3	3	2	2	1	2	3	1		2	2
		CO2	2	2	3	1	2	2	2	2	3	2	3	1		2	2
		CO3	2	2	2	3	3	3	2	2	2	2	3	1		2	2
		CO4	2	2	3	3	2	2	3	3	3	2	3	1		2	2

	MENT																	

Course Title/Code	MANAGEMENT OF BANKING AND FINANCIAL INSTITUTIONS /MCH219B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To study financial intermediary institutions, including banks, investment banks and institutional investors and their functions

Course Outcomes (COs)		Mapping
CO1	To study about the structure and evolution of various financial institutions, including banks and investment banks and understand their role in economic development.	Employability
CO2	To gain an understanding of the socio-economic and legal environment of the financial business and the process of bank management.	Skill Enhancement
CO3	To study the structure, institution and operating mechanism of financial markets and their role during financial crises	Employability
CO4	To analyze the importance of capital markets in the country and gain an insight into their working in the country.	Skill Enhancement

SECTION A

Banking and financial institutions in India: Commercial Banks, Cooperative Banks, Regional Rural Banks, Agriculture and Rural Development Banks (SLDBs), Development Banks and NBFCs; their constitution, Functions, Working and Evolution. Reserve Bank of India: Traditional and Developmental Functions and Working, Objectives, Instruments of Monetary Policy.
,

SECTION B

Nature of Banking Business: Socio, Economic and legal environment of banking business in India – official regulation and control over banks in India: Banking Regulation Act, 1949, Reserve Bank of India Act, 1934, Banking companies Act, 1970 etc –an overview, Diversification of Banking in India, Forms of Banking: Branch Banking, Unit Banking, Group Banking Chain Banking, Banking, correspondent Banking, Process of Bank Management; Branch location policies and decisions. Organizational Structure of Commercial Banks in India Department set up of head office, Zonal Office, Regional office and Branch offices.

SECTION C

Financial markets:: Structure, institution and operating mechanism and its role in Economic Development. Developed and Underdeveloped Markets, Money Market in India: Importance, features instruments. Measures to strengthen money market in India, Recommendations of the working group on money market, Report of the task force on money market and mutual funds

SECTION D

Capital Markets in India: New issue market and stock exchange, importance of stock exchanges: National stock exchange, methods of floating new issues, types of shares and debentures, The Securities and Exchange Board of India (SEBI), need for establishment of SEBI. Objectives and role of SEBI in Capital Markets

References:
1. Casu, Girardone and Molyneux, Introduction to Banking, 2nd ed., Pearson 2015.
2. Mishkin and Eakins, Financial Markets and Institutions, 8th ed., Pearson, 2015.
3. Simpson, Financial Markets, Banking, and Monetary Policy, Wiley, 2014.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH219B	MANAGEMENT OF BANKING AND FINANCIAL INSTITUTIONS	CO1	1	2	3		1	2	3		1	2				1	1
		CO2	1	2	3		1	2	3		1	2	1			1	1
		CO3		1	2	3		1	2	3		1		1		1	1
		CO4		1		2			1		2					1	1

Course Title/Code	<mark>**CORPORATE ACCOUNTING /MCH235B**</mark>
Course Type:	**Elective(Departmental)**
Course Nature:	**Hard**
L-T-P Structure	**3-0-0**
Credit	**3**

Course Objectives	The objective of this subject is to enable the students to have a comprehensive awareness about the provisions of the Company's Act and Corporate Accounts.

Course Outcomes (COs)		Mapping
CO1	To understand meaning, functions and applications of underwriting of shares.	Employability
CO2	To understand the concept of goodwill, methods of valuation of goodwill and factors influencing valuation of Goodwill.	Skill Enhancement
CO3	To understand the concepts, methods of valuation of shares and factors influencing share valuation.	Employability
CO4	To understand and prepare company final accounts and understand provision of tax, depreciation, dividends and interest.	Skill Enhancement

SECTION A- UNDERWRITING OF SHARES: Meaning – Underwriting Commission – Underwriter – functions - Advantages of Underwriting, Types of Underwriting – Marked and Unmarked Applications – Problems (Excluding Journal entries).

SECTION B- VALUATION OF GOODWILL: Meaning – Circumstances of Valuation of Goodwill – Factors influencing the value of Goodwill – Methods of Valuation of Goodwill: Average Profit Method, Super Profit Method, Capitalization of average Profit Method, Capitalization of Super Profit Method, and Annuity Method - Problems.

SECTION C- VALUATION OF SHARES: Meaning – Need for Valuation – Factors Affecting Valuation – Methods of Valuation: Intrinsic Value Method, Yield Method, Earning Capacity Method, Fair Value of shares. Rights Issue and Valuation of Rights Issue - Problem

SECTION D

COMPANY FINAL ACCOUNTS: Statutory Provisions regarding preparation of Company Final Accounts –Treatment of Special Items – Tax deducted at source – Advance payment of Tax – Provision for Tax – Depreciation – Interest on debentures – Dividends – Rules regarding payment of dividends – Transfer to Reserves – Preparation of Profit and Loss Account and Balance Sheet in vertical form.

References:
1. Arulanandam & Raman ; Corporate Accounting –II
2. Anil Kumar – Financial Accounting, HPH
3. Dr. S.N. Maheswari, Financial Accounting.
4. Soundarajan. A & K. Venkataramana, Corporate Accounting, VBH.
5. S. P. Jain and K. L. Narang – Corporate Accounting
6. S. Bhat- Corporate Accounting.
7. S P Iyengar, Advanced Accountancy, Sultan Chand
8. R L Gupta, Advanced Accountancy. 9. Shukla and Grewal – Financial Accounting.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH235B	CORPORATE ACCOUNTING	CO1	3	2	1	1	3	3	2	1	2	2	1	2		1	1
		CO2	2	2	3	1	2	2	3	1	3	2	3	3		1	1
		CO3	3	2	1	1	2	1	2	1	2	2	1	2		1	1
		CO4	2	3	1	1	3	1	2	1	2	2	1	2		1	1

Course Title/Code	**DIGITAL FINANCE / MCH240B**
Course Type:	**Elective (Departmental)**
Course Nature:	**Hard**
L-T-P Structure	**3-0-0**
Credit	**3**

Course Objectives	The objective of this course is to understand the nature of digital revolution in finance, key digital technologies and products, customer behavior in digital environment, state of digital revolution, FinTech and cryptocurrency and to gain knowledge of unfair digital practices in the financial sector.

Course Outcomes (COs)		Mapping
CO1	CO1: To acquaint the students with the fundamentals of digital finance	Employability
CO2	CO2: To enable students to understand the concepts of big data, artificial intelligence, blockchain	Skill Enhancement
CO3	CO3: To enable students to analyze and understand the concepts cryptocurrencies	Employability
CO4	CO4: To formulate and review fintech transformation strategies	Skill Enhancement

SECTION A

Digital transformation of finance: Concept of digital transformation of finance, Relationship of digital transformation of finance and FinTech, Reasons of digital transformation in finance, Stages of digital transformation.

SECTION B

Introduction to Key digital technologies: Authentication, Big data, Artificial intelligence, Blockchain. Prospects of digital finance in different countries, customer behavior in digital environment.

SECTION C

Cryptocurrencies: Nature of cryptocurrencies. Main features of cryptocurrencies. Acceptance of cryptocurrencies. Classification of cryptocurrencies, legal and Regulatory Implications of Cryptocurrencies (King & Wood Mallesons); Central bank digital currencies (CBDCs).

SECTION D

FinTech Transformation, FinTech Typology, Regulation of Mobile Money, Digitization of Financial Services; Crowdfunding – Regards, Charity and Equity; Unfair digital practices in the financial sector.

References:
1. David LEE Kuo Chuen, DING Ding, GUAN Chong, Financial Management in the Digital economy, 1st ed, World Scientific Publishing Co Pte Ltd., United States of America, 2022. ISBN: 9789811231452
2. Sanjay Phadke, 1st ed, Fintech Future : The Digital Dna Of Finance, Sage Publications India Pvt. Ltd., 2020.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH240B	Digital Finance	CO1	1	2	3		1	2	3		1	2	3			1	1
		CO2		1	2	3		1	2	3		1	2			1	1
		CO3	1	2	1		2		1		2		1			1	1
		CO4	1		3	3		2	2		3		3			1	1

Course Title/Code	<mark>PERFORMANCE AND COMPENSATION MANAGEMENT SYSTEMS / MCH216B</mark>
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	This course aims to impart the understanding about the performance and compensation management system and strategies adopted by the organizations to manage employees' performance. This course also intends to give insights on how to identify, integrate, and retain talent in an organization to deliver high performance

Course Outcomes (COs)	Mapping

CO1	Understand the significance of appraisal for an organization and individuals.	Employability
CO2	Develop an understanding of Performance Appraisal tools, and their applications	Skill Enhancement
CO3	develop and Apply about performance management systems and strategies adopted by the organization to manage the employee performance	Employability
CO4	demonstrate and Analyze the recent developments in performance managements and establish their readiness to cope with issues relating to performance management	Skill Enhancement

SECTION A

Conceptual Framework of Performance Management: Performance management process; Objectives of performance management system; Historical development in India; Performance management and performance appraisal; Linkage of performance management system with other HR practices. Components of Performance Management System: Performance planning; Ongoing support and coaching; Performance measurement and evaluation; Performance management and appraisal; Methods of performance appraisal; Appraisal Communication; Counseling, Identifying potential for development; Linking pay with performance.

SECTION B

Implementation and Issues in Performance Management: Implementing performance management system- Strategies and challenges; Characteristics of effective performance metrics; Role of HR professionals in performance management; Performance management as an aid to learning and employee empowerment; Performance management documentation; Performance management audit; Ethical and legal issues in performance management; Use of technology and e-PMS, Performance management practices in Indian organizations. Talent Management: Concept and approaches; Framework of talent management; Talent identification, integration, and retention. Unit V- Talent Management Practices and Process: Building the talent pipeline; Managing employee engagement; Key factors and different aspects of talent management; Using talent management processes to drive culture of excellence; Talent management in India; Future directions in talent management practice and research problem

SECTION C

Compensation management – An Introduction: Compensation Management, Compensation and Non-compensation Dimensions, 3-P Concept in Compensation Management, Compensation as Retention Strategy, Compensation for Special Groups, Significant Compensation Issues Compensation Strategy: New Thinking for the New Millennium: Pay the Person, Reward Excellence, Individualizing the Pay System, Organizational and External Factors Affecting Compensation Strategies, Compensation Strategies as an Integral Part of HRM, Compensation Policies

SECTION D

Managerial Remuneration: Managerial Remuneration – Concept and Elements, Executive Compensation: Methodology, CEO-to-worker pay ratio, Rewarding – A New Approach, Remuneration Ceilings, Remuneration Ceilings under Section XIII, Benchmark Compensation Package as per the Industry Standards Performance Linked Compensation: Performance management, Performance Appraisal and Measurement, Pay for Performance Plans, Balancing of Internal and External Equity ;Pay Structures: Performance Based and Pay Based Structures, Designing Pay Structures, Comparison in Evaluation of Different Types of Pay Structures, Designing Pay Ranges and Bands, Significance of Factors Affecting pay levels; Rewards & Recognition: Concept of Reward Management, Developing Reward Policies, Reward Strategy, Developing Total Reward Approach, Reward Management in Service Sector, Total Reward Framework of Service Industries in India, Factors affecting Reward Management Policies in Service Sector, Process of Designing a Successful Reward Strategy; International Compensation: Expatriate Compensation and its Objectives, Elements of Expatriate's Compensation Package, Problems in Compensation Management

References:
1. Armstrong, M. & Baron, A., Performance management and development, Jaico Publishing House, Mumbai, 2006.
2. Armstrong, M., Performance management: Key strategies and practical guidelines, 2nd ed, Kogan Page, London, 2000
3. T.V Rao, Performance Management: Toward Organizational Excellence, 2nd ed, Sage Publications, 2015.
4. Bagchi, S. N., Performance management, 2nd ed, Cengage Learning India, 2013

5. Bhattacharyya, D.K., Performance management systems and strategies, 1st ed, Pearson Education, 2011
6. Robert B., Performance management, 2nd ed, McGraw-Hill Education India, 2012
7. **Larry Isrealite, ASTD, Talent management: Strategies for success from six leading companies, 1st ed, Cengage Learning, 2010**

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH216B	PERFORMANCE AND COMPENSATION MANAGEMENT SYSTEMS	CO1	2	2	2	2	2	2	2	2	2	2	2	2		1	1
		CO2	2	2	2	2	2	2	2	2	2	2	2	2		1	1
		CO3	3	3	3	3	3	3	3	3	3	3	3	3		1	1
		CO4	2	2	2	2	2	2	2	2	2	2	2	2		1	1

Course Title/Code	**RELATIONAL DATABASE MANAGEMENT SYSTEMS/CSH216B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	2-0-2
Credits	3
Course Objectives	Understand and apply core knowledge in Management Information Systems (MIS)

Course Outcomes (COs)		Mapping
CO1	Understand the basic concepts of Database and various data model used in database design concepts and architecture	Employability
CO2	Understands the importance of computer in various fields of management and administration	Skill Enhancement
CO3	Apply the knowledge of SQL and construct queries using SQL on databases	Employability

CO4		Understanding the basics of report writing tool in dbms and pl/sql												Skill Enhancement			

SECTION A
Basic Concepts – Traditional file oriented approach, Disadvantages of simple file system, Database approach, Advantages of Database approach, Database Management Systems (DBMS), Components of DBMS Environment, Advantages and Disadvantages of DBMS, DBMS Architecture, Data Independence, Data Models, Keys.
SECTION B
Computers: An introduction, use of computers in business, advantages and disadvantages, computerized system for inventory control, payroll order, banking and accounting. SQL using ORACLE
SECTION C
Introduction to SQL, Components of SQL: DDL, DML & DCL, Data types in SQL, DDL Commands: Create, Alter, Drop, Truncate, Creating queries with DDL commands and implementing constraints. DML Commands: Insert, Delete, Update, Select, Select with Group

SECTION D
Order by. Creating queries with DML commands, Operators: Set and Logical, SQL functions: Numeric functions, Scalar functions and Group functions Report-Writing: Commands, advantages of Report writing..

Computer Lab: SQL and PL/SQL using Oracle: Introduction to SQL PLUS environment, Executing and Editing SQL Commands, Creating and executing simple PL/SQL programs. OR Any RDBMS Package like MS-Access

References:
1. Ramez Elmasri, Shamkant B. Navathe, Fundamentals of Database Systems , 5th ed, Pearson Education, 2008
2. C. J. Date , An Introduction to Database Systems , Addison Wesley (Singapore) Pvt. Ltd., New Delhi,
3. George Koch, Kevin Loney, ORACLE 9I computer References, 1st ed, Tata Mc-Graw Hill, 2002
4. Raghu Ramakrishnan, Johannes Gehrke, Database Management, McGraw-Hill, 2003

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
CSH216B	RELATIONAL DATABASE MANAGEMENT SYSTEMS	CO1	2	2	2	2	2	2	2	2	2	2	2	2		1	1
		CO2	2	2	2	2	2	2	2	2	2	2	2	2		1	1
		CO3	3	3	3	3	3	3	3	3	3	3	3	3		1	1
		CO4	2	2	2	2	2	2	2	2	2	2	2	2		1	1

Course Title/Code	**MANAGING ENTREPRENEURIAL GROWTH AND STRATEGY /MCH222B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	The course aims to make students understand the advantages of having a scalable business model, challenges of managing and growing an entrepreneurial firm and identifying the various growth strategies.

	Course Outcomes (COs)	Mapping
CO1	To understand the importance of developing sustainable competitive advantages through strategic planning and execution	Employability
CO2	To understand the internal and external environment and identify the resources and capabilities of a firm as a source of competitive advantage	Skill Enhancement
CO3	To understand the initial entrepreneurial strategies that firms adopt and develop competitive position in the industry	Employability
CO4	to understand how industry helps in determining strategy and how different types of innovation fit into business strategy	Skill Enhancement

SECTION A

Entrepreneurial process, introduction to entrepreneurial strategy - strategy and growth , amalgam of entrepreneurship and strategic management, Why grow? Reasons to Grow, Sustainable competitive advantage, Sustained Growth, Input-process- Output Model,Valuable competitive position, strategist challenge- define values, opportunities and capabilities ,stages of strategy analysis-steps , formulation- methods and process, and 4A Model of strategy implementation.

SECTION B

Industry and Firm analysis- competitive markets; Rent seeking strategies- monopoly rents, Ricardian rents, entrepreneurial rent; Monopoly rents,Industry analysis- five force analysis, Ricardian rent- analyzing the firm's capabilities, resource based view; resource types- tangible & intangible ,building firm capabilities, Identifying attributes of strategic resources- VRIN Framework; Creating barriers to Imitate.

SECTION C

Entrepreneurial Competitive Positioning- Defining Isolating Mechanisms, First mover advantages- definition, sources, advantages and disadvantages. Developing competitive position- differentiation, cost leadership, focused, niche and integrated market strategies, Understanding competitive positioning: Strategic mapping- definition and concept.

SECTION D

Strategy and Industry Environment- Dynamics of Competition- Market dynamics: understanding entrepreneurial/ Schumpeterian rents; Innovation and types of innovation; Understanding the Industry life cycle: S- Curve and introduction to Competitive life cycle (CLC)analysis, Stages of CLC- emergent, maturity and growth phase, Disruption- Meaning, types, new technology disruptions – why Incumbent firms fail?

References:

1. Lisa K. Gundry , Jill R. Kickul **,** Entrepreneurship Strategy**,** Changing Patterns in New Venture Creation, Growth, and Reinvention, Sage Publications , 2007.
2. Jared D. Harris, Michael J. Lenox. The Strategist Toolkit, Darden Business Publishing, 2013
3. Jeanne Liedtka, Andrew King,Kevin Bennett, Solving Problems with Design Thinking – Ten Stories of What Works , Columbia Business School Publishing, 2013
4. Michael E. Dobbs, (2014) "Guidelines for applying Porter's five forces framework: a set of industry analysis templates", Competitiveness Review, Vol. 24 Issue: 1, pp.32-45.
5. Porter, M. E. The Competitive Advantage: Creating and Sustaining Superior Performance. NY: Free Press, 1985

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH222 B	MANAGING ENTREPRENEURIAL GROWTH AND STRATEGY	CO1	3	3	1	1	2	2	2	3	2	2	3	1		1	1
		CO2	3	3	1	1	2	2	2	3	2	2	3	1		1	1
		CO3	3	3	1	1	2	2	2	3	2	2	3	1		1	1
		CO4	3	3	1	1	2	2	2	3	2	2	3	1		1	1

Course Title/Code	**APPLIED ENTREPRENEURSHIP PROJECT/MCH225B**
Course Type:	Elective (Departmental)
Course Nature:	Soft
L-T-P Structure	0-0-12
Credit	6
Course Objectives	At the end of this course, students will be able to synthesize knowledge and skills previously gained and applied to an in-depth study and execution of an entrepreneurial venture .

	Course Statement	**Mapping**
CO1	To understand the challenges of entrepreneurship	entrepreneurship
CO2	To Understand the functioning of startup	entrepreneurship
CO3	To understand the functioning of an entrepreneur	entrepreneurship
CO4	To be able to apply the knowledge to set up a new business	entrepreneurship

General Guidelines for the project:

a) Applied Entrepreneurship Project is a compulsory course during semester IV

b) It is an in-depth report of an entrepreneurial venture that incorporates a critical and analytical approach to the subject with a rigorous research focus. Alternatively, it is researching an issue or problem academically to find a solution.

c) It is a faculty- supervised course component .

d) Each student will be attached to a Faculty Supervisor.

e) The evaluation of the Applied Entrepreneurship Project is done in two stages viz. continuous evaluation and Final Industry

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH225B	Applied Entrepreneurship Project	CO1	2	3	1	1	3	1	1	1	2	1	2	2		1	1
		CO2	2	3	1	1	3	1	1	1	2	1	2	1		1	1
		CO3	2	3	1	2	3	1	1	1	2	2	3	1		1	1
		CO4	2	3	1	2	3	1	1	1	2	1	3	1		1	1

Course Title/Code	**MATERIAL & INVENTORY MANAGEMENT /MCH226B**
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	a)To provide functional knowledge of Materials Management, Materials Procurement, Inventory Control as well as Warehousing for both service as well as manufacturing sector; b)To provide theoretical and practical exposure for application of such concepts.

	Course Outcomes (COs)	Mapping
CO1	Explain the Meaning of Materials Management	Employability
CO2	Discuss the Scope of Materials Management	Skill Enhancement

CO3	Discuss the Objectives and Significance of Materials Management												Employability		
CO4	Discuss the Role of Materials Management in Other Areas of Management Functions												Skill Enhancement		

SECTION A

Definition and Importance of Material Management, Principles of Material Management, Material Management Cycle: Process & Documentation

SECTION B

Procurements: Centralized vs Decentralized, Concepts of Inventory Control

      i.   Types of inventory control

     ii.   Techniques of Inventory Control

SECTION C

Inventory Replenishment

SECTION D

Challenges of Material Management

References:

1. Guide Book to Accreditation Standards for Hospitals 4th ed,, NABH, 2016.
2. Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013
3. BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH226B	MATERIAL & INVENTORY MANAGEMENT	CO1	3	1	2	2	1	1	2	1	2	X	X	X	1	1
		CO2	2	1	2	2	1	1	2	1	2	X	X	X	1	1
		CO3	2	2	2	1	1	1	2	2	2	X	X	X	1	1
		CO4	3	1	2	2	1	1	2	1	2	X	X	X	1	1

Course Title/Code	**HEALTHCARE INFORMATION SYSTEMS / MCH227B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	The purpose of this course is to introduce the student to the principles of computer technology related to health care with emphasis on computerized medical billing, health care data collection, storage, retrieval, security arrangement, presentation, and verification. This course will also introduce the components and requirements of the electronic health record.

Course Outcomes (COs)		Mapping
CO1	Conceptualise and promote the need for and uses of quality data and information requirements across the patient care providers	Employability
CO2	Organize, analyze and manage health care data in order to improve health care outcomes, implement standards and control costs	Skill Enhancement
CO3	Manage the content, integrity, accessibility, use, and protection of information resources	Employability
CO4	Analyze and respond to the information needs of internal and external agencies throughout the healthcare continuum	Skill Enhancement

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SECTION A
</div>

Introduction to HMIS & Its need in a Hospital, Features of HMIS, Categorization of HMIS Modules

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SECTION B
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Operations Management of HMIS Modules, Advantages of HMIS

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SECTION C
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Challenges of HMIS, Procurement of HMIS Software

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SECTION D
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Implementation of HMIS

References:

1.Guide Book to Accreditation Standards for Hospitals 4th ed,, NABH, 2016.

2.Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013

3.BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH227B	HEALTHCARE INFORMATION SYSTEM	CO1	3	2	2	2	1	2	2	1	2	1	X	X		1	1
		CO2	3	2	2	2	1	1	2	1	2	1	X	X		1	1
		CO3	3	2	2	2	1	1	2	1	2	1	X	X		1	1
		CO4	3	2	2	2	1	1	2	1	2	1	X	X		1	1

Course Title/Code	<mark>**MANAGEMENT OF MEDICATION /MCH228B**</mark>

Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Students will gain a broader understanding of health-system pharmacy practice, with a focus on acute and ambulatory care, standards and regulations

Course Outcomes (COs)		Mapping
CO1	To introduce students to the Pharmacy Services in Hospital (Medication & its Management)	Employability
CO2	To gain the knowledge of drug administration & monitoring of drug therapy	Skill Enhancement
CO3	To understand the Inventory Control in Pharmacy & Adverse drug event	Employability
CO4	To gain knowledge about the management of medication at the national level in Public Sector	Skill Enhancement

SECTION A

Pharmacy Services And Usage Of Medication , Policy And Procedures To Guide Storage Of Medication

SECTION B

Policy And Procedures To Guide Prescription Of Medication , Policy And Procedures To Guide Safe Dispensing Of Medication

<center>**SECTION C**</center>

Policy And Procedures For Medication Administration , Adverse Drug Events Monitoring

<center>**SECTION D**</center>

Policy And Procedures For Use Of Narcotic Drugs And Psychotropic Substances

References:

1. Guide Book to Accreditation Standards for Hospitals 4th ed,, NABH, 2016.

2. Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013

3. BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH228B	MANAGEMENT OF MEDICATION	CO1	3	2	1	2	1	1	X	2	2	1	3	3		1	1
		CO2	2	2	1	X	1	1	X	2	2	1	3	2		1	1
		CO3	3	2	2	3	1	1	X	2	2	1	3	2		1	1
		CO4	3	2	2	2	1	2	X	1	2	1	2	2		1	1

Course Title/Code	<mark>**HEALTHCARE AND HUMAN RESOURCE MANAGEMENT /MCH229B**</mark>
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Create executive decision-making strategies, as applied to human resources management

Course Outcomes (COs)		Mapping
CO1	Create executive decision making strategies, as applied to human resource management	Employability
CO2	Establish Organizational workforce plans, in alignment with organizational goals and objectives	Skill Enhancement
CO3	Evaluate workforce productivity. Understand and value the strategic role of human resource management in a healthcare organization	Employability
CO4	Understand and value the impact of workforce diversity and globalization on healthcare organizations	Skill Enhancement

SECTION A

Introduction and Functioning of HR, HR Planning

.

SECTION B

Recruitment, Staff Skill Development & Training

.

SECTION C

Performance Appraisal

. **SECTION D**

Documentations in HR Department, Challenges in HR

.

References:

1. Guide Book to Accreditation Standards for Hospitals 4th ed,, NABH, 2016.

2. Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, "Hospital Administration," Elsevier India,2013

3. BM Sakharkar, "Principles & Planning of Hospital administration," 2nd ed, Jaypee, 2009.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH229B	HEALTHCARE & HUMAN RESOURCE MANAGEMENT	CO1	1	2	1	1	2	X	2	1	2	X	X	X		1	1
		CO2	X	3	2	1	3	1	2	2	1	1	2	2		1	1
		CO3	2	1	3	2	3	X	2	2	1	X	X	1		1	1
		CO4	X	3	X	3	2	2	2		2	3	2	X		1	1

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

Course Outcomes (COs)		Mapping
CO1	To acquaint students with the concepts of project management	Skill Enhancement
CO2	Make students capable to analyze, apply and appreciate contemporary project management tools	Employability

CO3	To enable students to comprehend the fundamentals of Contract Administration, Costing and Budgeting.	Employability
CO4	To make them understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation.	Skill Enhancement

SECTION A

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

SECTION B

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

SECTION C

Cost of projects, Means of financing, Estimates of Sales & Production, Cost of Production, Working Capital Requirement & Financing, Projected income statement, Balance sheet and cash flow with multi year projections, Consideration of alternative sources of finance. Cost and Time Management issues in Project planning and management.

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH231B	PROJECT MANAGEMENT	CO1	1	2	2	X	3	2	X	X	X	X	1	1		1	1
		CO2	3	X	3	X	2	2	X	3	2	X	2	2		1	1
		CO3	X	2	2	2	2	1	3	X	2	X	2	2		1	1
		CO4	2	X	X	3	2	3	2	2	3	3	2	2		1	1

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

	Course Outcomes (COs)	Mapping
CO1	To acquaint students with the concepts of FTM	Skill Enhancement
CO2	To acquaint students to the concept and importance of material logistics	Employability
CO3	To acquaint students with concepts of transportation and warehousing.	Skill Enhancement
CO4	To acquaint students with the application of FTM	Employability

SECTION A

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

SECTION B

Transportation: A Brief Study of different modes of transport used for movement of materials, their relative advantages, disadvantages and suitability. Road Transport: Road System, Role of Road Transport in Movement of Materials, Role

of National Highway Authority of India, Limitations of Road Transport System, Consignment Rail transport: India Railway Network

and Role in Transportation of Materials and Cargo, Consignment Note.

SECTION C

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

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

SECTION D

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

References:

1. Dutta A.K., Materials Management: Procedures, Text and cases, Prentice Hall of India Pvt. Ltd., New Delhi.

2. Gopalakrishnan, P. and Sundareson, M., Materials Management: An Integrated Approach, Prentice Hall of India Pvt. Ltd., New Delhi.

3. Varma, M.M., Essentials of Store Keeping and Purchasing, Sultan Chand and Sons, New Delhi.

4. Shah N.M. An Integrated concept of Materials Management, Indian Institute of Materials Management, Baroda Branch, Baroda.

5. Sharma S.C., Material Management and Materials Handling, Khanna Publishers, New Delhi.

6. Arnold, Chapman and Ramakrishnan, Introduction to Materials Management 5th ed., 2007 Pearson Education, Inc.

7. Pooler Victor H. Purchasing and Supply Management, Creating the Vision, New York, Chapman & Hall, 19997.

8. Dutta A.K., Material Management, Inventory Control and Logistics, Jaico Publishing House, Mumbai.

9. Roy Chaudhary, E.K. : Logistics Management

10. Sharma SC: Warehousing and Distribution.

11. Gopalakrishna, P. and Shandilya M.S. : Stores Management and Logistics. 12. Martin Christopher : Logistics – The Strategic Issues

Courses Code	Courses	Course	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO		PSS	PSS

		Outcomes	1	2	3	4	5	6	7	8	9	10	11	12		O1	O2
MCH232B	FREIGHT TRANSPORT MANAGEMENT	CO1	3	2	3	2	1	1	2	1	1	3	1	2		1	1
		CO2	3	2	2	1	2	1	2	1	1	3	1	2		1	1
		CO3	2	3	2	2	1	2	1	1	1	2	1	2		1	1
		CO4	2	3	2	1	1	1	1	1	1	3	1	2		1	1

Course Title/Code	**SAS AND TABLEAU/ MCH247B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	0-0-4
Credit	2
Course Objectives	The course acquaints the student to the concept and importance of material logistics and distribution task like transportation and warehousing.

	Course Outcomes (COs)	Mapping
CO1	Deploy SaS in a virtual environment and import data for analysis.	Employability
CO2	Prepare and manipulate datasets for analysis in SaS.	Skill Enhancement
CO3	Understand Tableau Interface, Panes and Implement Visualization Techniques.	Employability
CO4	To Get to know and implement the tips and tricks to help fulfill business requirements using Tableau.	Skill Enhancement
equisites if any)		

Section I

Introduction to SaS: Overview of SaS university edition, Deploying SaS Studio on virtual platform, File Management, SaS libraries, importing data, Structure of Data and Data Types, Program Syntax, saving data, PROC IMPORT and PROC CONTENTS, Displaying Data and Generating Logs, List Input.

Section II

SaS Programming: Variables and Syntax Rules, Data Set Options, Operators, In-File Statement, Input Styles, Select Statements, Leave and Continue, Decision Making via SaS, Where Statement, Looping Constructs, SaS Functions, Arrays and Array Processing, Modifying and Combining Data Sets.

Section III

SaS Procedures: Proc Data, Proc Sort, Proc Means Sort, Proc Means, Proc Univariate, Proc Freq, Proc Plot, Proc Sgplot, Proc Summary, Proc Contents, Proc Append, Proc Copy, Proc SQL, Proc Delete, Proc Format, Proc Import, Proc Export, Proc Transpose, Proc GChart, Proc GPlot, Proc Report.

Section IV

Visualization with Tableau -I: Tableau Software Ecosystem, Toolbar Icons, Data Window and Aggregation, Tableau Data Source, Data Extract, Connect to Data, Measure Names, Number of Records & Measures, Heat Maps, Tree maps, Bar Chart, Line Chart, Area Fill Charts, Pie Chart, Scatter Plot, Circle View, Bullet Graph, Packed Bubble, Histogram, Boxplot and Gantt Chart, Sorting Data, Enhancing Views with Filters, Sets, Groups & Hierarchies.

Visualization with Tableau - II: Cross-tabulation, Dashboard Designing, Dashboard Actions, Joining Database, Functions in Tableau, Aggregate Functions, Numeric Functions, Date Functions, Stories, Advanced Mapping, Advanced Parameters, Tableau Best Practices, Combining Multiple Dashboards into Stories, Publishing Stories and Dashboards.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH247B	SAS & TABLEAU	CO1	3	2	3	3	2	X	3	2	2	2	X	1	1	1
		CO2	3	3	3	2	2	X	3	2	2	2	X	2	1	1
		CO3	3	3	3	3	2	X	3	2	2	2	X	1	1	1
		CO4	3	3	3	3	3	X	3	3	3	3	X	1	1	1

SEMESTER - 5										
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CSW351	Website Designing	CST	Workshop	CORE	0	0	3	3	1.5

Code	Name	Dept	Type	Category	L	T	P	C	
B									
MCH302B	INTERNATIONAL BUSINESS	DMC	HARD	CORE	3	0	0	3	3
MCH303B	STRATEGIC MANAGEMENT	DMC	HARD	CORE	3	0	0	3	3
CDS305B	PROFESSIONAL DEVELOPMENT PROGRAMME V	CDC	SOFT	UC	1	0	1	2	0

FINANCE AND ACCOUNTS									
MCH337B	COMPANY LAW	DMC	HARD	ELECTIVES	3	0	0	3	3
MCH304B	FINANCIAL DERIVATIVES	DMC	HARD	ELECTIVES	3	0	0	3	3
MCH305B	BUSINESS TAXATION	DMC	HARD	ELECTIVES	3	0	0	3	3
MCH306B	MERGERS AND ACQUISITIONS	DMC	HARD	ELECTIVES	3	0	0	3	3
EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
Entrepreneurship & Family Business Specialization									
MCH338B	NEW AGE ENTREPRENEURSHIP	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH339B	INTERNATIONAL FAMILY BUSINESS MODELS	DMC	HARD	ELECTIVE	3	0	0	3	3
EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
Healthcare Management Specialization									
MCH310B	HEALTH CARE INSURANCE & MANAGEMENT CARE	DMC	HARD	ELECTIVE	3	0	0	3	3

MCH311B	QUALITY ASSURANCE IN HEALTH CARE	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH312B	LEGAL & ETHICAL ISSUES IN HEALTH CARE	DMC	HARD	ELECTIVE	3	0	0	3	3
EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
Operations Management									
MCH313B	LOGISTICS AND INTERNATIONAL SUPPLY CHAIN MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH314B	PURCHASING AND INVENTORY MANAGEMENT	ME	HARD	ELECTIVE	3	0	0	3	3
MCH315B	SERVICE OPERATIONS MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
Business Analytics Specialization									
MCH340B	HR ANALYTICS	DMC	HARD	ELECTIVE	2	0	2	4	3
MCH341B	Social Media Analytics	DMC	HARD	ELECTIVE	2	0	2	4	3
EDS289/ EDS290/ EDS288/ PSE301/ LWS325/ LWS323	Applied Psychology/Applied Sociology/Applied Philosophy/Essential of Peace and Sustainability/Law Relating to Intellectual Property Rights/Cyber Law	EDU/ LAW/ PSE	SOFT	ELECTIVE	1	0	2	3	2
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

BBA- Fifth Semester

Course Title/ Code	Website Designing /CSW351B
Course Type:	**Core**(Departmental)
Course Nature:	Workshop
L-T-P Structure	0-0-3
Credit	1.5
Objectives	Students will be able to design a website.

	Course Outcomes (COs)	Mapping
CO1	Demonstrate the basic knowledge of Internet its basic features ,basics of HTML 5.0 to be able to create static web pages	Employability
CO2	Build complete static web site for a new start-up, business or entrepreneurship	Skill Enhancement
CO3	Exhibit dynamic nature to a website for expanding business	Employability
CO4	Ability to demonstrate in depth knowledge of styling and making user friendly dynamic websites.	Skill Enhancement

Section-A

INTRODUCTORY CONCEPTS: Internet, Intranet, Extranet, Web Browser and WWW, W3C, HTTP, Cookies, Session, IP Address, Domain Name, Web Server, website and webpage structure. Markup Language, HTML editor: Dreamweaver, Introduction to HTML tags: html, head, body, div, br, hr, p, text formatting, text styles, layouts, marquee, lists: ordered, unordered and definition lists, hyperlinks: http/https/ftp, images,

images as hyperlinks, adding graphics, audio and video, table, Frames, iframes, color names, values & shades, HTML entities, symbols, charset, Forms.

Section-B

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

Section-C

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

Section-D

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

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

LIST OF EXPERIMENTS:

· HTML: Basic Tags

· HTML: Graphics & Tables

· HTML: Frames & Form**s**

· HTML5.0: Basic Tags

· HTML5.0: DOM & Forms

· HTML: Canvas & SVG

· HTML: Media

· HTML: API's

· CSS

· Minor Project

Text Books:
- Pro HTML5 and CSS3 Design Patterns Paperback – 2012 by Dionysios Synodinos, Michael Bowers, Victor Sumner

  · Murach's HTML5 and CSS3 Paperback – 2012 by Zak Ruvalcaba
- Dive into HTML5 by Mark Pilgrim.

Reference Book:
- Hello! HTML5 & CSS3: A user-friendly reference guide Paperback by Rob Crowther.
- HTML5 Guidelines for Web Developers by Klaus Förster.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
		CO1	X	X	X	1	2	X	X	2	2	1	X	X	2	2
		CO2	X	X	X	2	3	X	1	2	2	1	X	1	2	2
CSW351B	Website Designing	CO3	X	X	X	2	3	X	2	3	3	2	X	2	2	2
		CO4	X	X	X	2	3	X	2	3	3	3	X	2	2	2

Course Title/Code	**INTERNATIONAL BUSINESS/MCH302B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Identify and explain theories and factors that determine the business environment of emerging markets, the relevant changes over time,and the Implications for corporate strategies devised for those markets .

SECTION A

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

SECTION B

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

Section C

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

Section D

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

References:

1. International Business, Charles W L Hill & Arun K.Jain (Tata McGraw-Hill, 6th edition)
2. International Business, Cherunilam, Francis, Text and Cases (PHI, Fourth edition (Revised))
3. International Business, Justin Paul (Prentice Hall)
4. International Business, Dr. P. Subba Rao (Himalaya Publications, 2nd Revised Enlarged edition

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH302B	INTERNATIONAL BUSINESS	CO1	2	3	x	x	3	2	x	x	1		x	x	2	2
		CO2	3	x	x	2	3	3	x	2	2	2	x	x	2	2
		CO3	x	x	3	2	3	3	2	3	3	3	x	x	2	2
		CO4	x	x	3	x	2		3	2	2	2	x	x	2	2

Course Title/Code	<mark>**STRATEGIC MANAGEMENT/MCH303B**</mark>
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	Describe & identify the dynamic environment of Business Management .

Course Outcomes (COs)		Mapping
CO1	Describe & identify the dynamic environment of Business Management .	Employability
CO2	Examine & understand the need & importance of of Strategic Management	Skill Enhancement
CO3	Analyze and interpret Porter's Five force model & demonstrate Value chain analysis	Employability
CO4	evaluate & summarize the various corporate strategies adopted by the companies for sustenance of business	Skill Enhancement

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

Reference Books:

1 Arthur, A, Thomson and Strickland, A, J. (2002), Strategic Management – Concept and cases, Tata McGraw Hill, New Delhi

2 Glueck, W.T. and Lawrence, R. Jauch (2003), Business Policy and Strategic Management, Frank Bros & Co

Kazmi Azhar, Business Policy and Strategic Management, Tata McGraw Hill, New Delhi, 2004

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH303B	STRATEGIC MANAGEMENT	CO1	X	3	2	1	2	3	2	2	1	1	X	X		2	2
		CO2	2	2	X	2	1	2	2	3	2	2	1	X		2	2
		CO3	3	2	3	2	X	2	3	2	2	2	X	X		2	2
		CO4	2	X	2	3	2	2	2	3	3	3	X	X		2	2

Course Title/Code	**PROFESSIONAL DEVELOPMENT PROGRAMME V /CDS305B**
Course Type:	CORE (CDC)
Course Nature:	SOFT
L-T-P Structure	1-0-1
Credit	0
Course Objectives	To give overview about professional development to the students

	Course Outcomes (COs)	Mapping
CO1	To give students the exposure to 21st century skills	Skill Enhancement
CO2	To understand the interview process	Skill Enhancement
CO3	To create and deliver presentations confidently with effective use of body language	Skill Enhancement

CO4	To understand how to be professional	**Skill Enhancement**
CO5	To improve writing as well as speaking skills of students	

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
CDS305B	PROFESSIONAL DEVELOPMENT PROGRAMME V	CO1	X	X	X	X	1	1	2	1	1	1	X	X		1	1
		CO2	X	X	X	1	X	X	1	X	2	X	X	X		1	1
		CO3	X	1	X	X	X	X	2	X	3	X	X	X		1	1
		CO4	X	X	X	X	X	X	2	X	3	X	X	X		1	1
		CO5	X	X	X	1	X	X	X	X	3	X	X	X		1	1

Course Title/Code	COMPANY LAW/ MCH337B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To acquaint the students with the fundamental knowledge of Company Law.

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamental knowledge of Company Law.	Employability
CO2	To understand and be able to develop the MOA & AOA and its alteration.	Skill Enhancement
CO3	To familiarize the students with the regulatory framework of issuing share capital and related legal provisions	Employability
CO4	To understand the legality around management of a company as per the Indian Companies Act.	Skill Enhancement

SECTION A

Introduction: The Companies Act 2013 (Basic elementary knowledge), definition & nature of company, essential characteristics of a company, types of companies, incorporation of company & commencement of business. Promoters-role & their legal position, lifting of corporate veil.

SECTION B

Memorandum of Association & Articles of Association, its contents, Alteration of Memorandum of Association & Articles of Association, Doctrine of Ultra-vires, Doctrine of Indoor Management, its exceptions.

SECTION C

Prospectus, statement-in-lieu of prospectus, Misrepresentation in prospectus, share capital, Allotment of shares ¬definition of share, share warrant, share certificate, Difference between share & stock, Calls on shares, Types of shares, Voting rights, Right issues, Debentures.

SECTION D

Management of Company, Appointment of directors, Legal Position, Duties & liabilities & Powers, Company Meetings-statutory, Annual general meeting, extraordinary meeting, meeting of BOD, Guidelines for managerial remuneration, Quorum for different meetings, Kinds of resolutions, Provisions regarding borrowing, & issue of debentures, dividend and bonus shares, Winding up of company, Oppression & mismanagement

References:

1. Avtar Singh : Company Law
2. Dutta on Company Law
3. N.D. Kapoor on Company Law,
4. Charles Wild and Stuart Weinstein Smith and Keenan, Company Law, Pearson Longman, 2009

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH 337B	COMPANY LAW	CO1	2	1	1	X	3	3	X	3	1	X	X	X		2	2
		CO2	2	1	1	X	3	3	X	3	X	X	X	X		2	2
		CO3	2	2	1	1	3	3	X	3	X	X	2	1		2	2
		CO4	2	2	1	1	3	3	X	3	1	X	X	X		2	2

Course Title/Code	**FINANCIAL DERIVATIVES/MCH304B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	This course presents and analyzes derivatives, such as forwards, futures, and options. These instruments have become extremely popular investment tools over the past several decades, as they allow one to tailor the amount and kind of risk one takes, be it risk associated with changes in interest rates, exchange rates, stock prices, commodity prices, inflation, weather, etc. They are used by institutions as well as investors, sometimes to hedge (reduce) unwanted risks, sometimes to take on additional risk motivated by views regarding future market movements.

Course Outcomes (COs)		Mapping
CO1	To acquaint the students with the fundamentals of financial derivatives.	Employability
CO2	To enable the students to understand various categories of financial derivatives.	Skill Enhancement
CO3	To enable the students to take investment decisions by implementing derivatives strategies and risk management.	Employability
CO4	To enable the students to apply understanding of Forex Derivatives for risk management	Skill Enhancement

SECTION-A

Overview of Derivatives, Functions, Participants and Products, Types and Significance
.

SECTION-B

Futures and Forwards, Options, Payoffs

SECTION-C

Index Futures, Stock Futures, Strategies, Markowitz's Risk-Return Optimization; Optimal Portfolio; Efficient Market Hypothesis; Overview of Fundamental & Technical Analysis

SECTION-D

Managed Portfolios and Performance Evaluation: Sharpe's, Treynor's, Jensen's and Fama's Performance Measures; Portfolio Revision: Portfolio Rebalancing and Upgrading.

References

1. Fundamental of Options & Futures" authored by John C Hull, Pearson Education
2. Derivatives Valuation and Risk Management, Dubofsky, David A; Miller, Thomas W (Oxford University Press)
3. Financial Derivatives, Kumar, S S S (Prentice Hall of India)
4. Financial Derivatives: Theory, Concepts and Problems, Gupta, S L (Prentice Hall of India)
5. Fundamentals of Futures and Options Markets, 4e, Hull, John C (Pearson Education)
6. Derivatives & Risk Management, 1e, Varma, J R (Tata McGraw- Hill Publishing Company)
7. Derivatives and Financial Innovations, Bansal, M., Bansal, N. (Tata McGraw- Hill Publishing Company)
8. Financial Derivatives in Theory and Practice, Hunt, P J; Kennedy, J E (John Wiley & Sons)
9. Risk Management & Derivatives, Stulz, Rene M (Cengage Learning Pvt. Limited)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH304B	FINANCIAL DERIVATIVES	CO1	2	3	2	1	2	X	2	3	X	2	2	2		1	1
		CO2	2	3	1	2	2	X	2	3	X	2	2	1		1	1
		CO3	3	2	2	1	3	X	1	2	X	2	2	2		1	1
		CO4	2	3	2	1	2	X	2	3	X	2	2	1		1	1

Course Title/Code	<mark>BUSINESS TAXATION/MCH305B</mark>
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To understand the basic concepts and definitions under the Income Tax Act, 1961.

	Course Outcomes (COs)	Mapping
CO1	To understand the basic concepts and definitions under the Income Tax Act, 1961.	Employability
CO2	To compute the Income under different heads of Income of Income Tax Act,1961.	Skill Enhancement
CO3	To understand and apply the knowledge about submission of IT Return, Advance Tax, Tax deducted at Source, Tax Collection Authorities.	Employability
CO4	To compute tax liability of a person defined as per IT Act 1961.	Skill Enhancement

SECTION A

Income Tax Act-1961. (Meaning, Concepts and Definitions) Income, Person, Assessee, Assessment year, Previous year, Agricultural Income, Exempted Income, Residential Status of an Assessee, Fringe benefit Tax, Tax deducted at Source, Capital and Revenue Income and expenditure. Computation of Taxable Income under the different heads of Income. A) Income from Salary Salient features, meaning of salary, Allowances and tax Liability-Perquisites and their Valuation- Deductions from salary.(Theory and Problems)

SECTION B

Computation of Taxable Income under the different heads of Income. (continued) B) Income from House Property- Basis of Chargeability-Annual Value-Self occupied and let out property- Deductions allowed (Theory and Problems) C) Profits and Gains of Business and profession Definitions, Deductions expressly allowed and Business and professions disallowed (Theory and Problems) D) Capital Gains Chargeability-definitions- Cost of Improvement Short term and long term capital gains-deductions (Theory only)

SECTION C

Computation of Total Taxable Income of an Individual. E) Income from other sources Chargeability-deductions-Amounts not deductible. (Theory only) Gross total Income- deductions u/s-80(80ccc to 80 u) Income Tax calculation- (Rates applicable for respective Assessment year) Education cesses

SECTION D

Miscellaneous :Tax deducted at source-Return of Income-Advance payment of Tax- methods of payment of tax-Forms of Returns-Refund of Tax. (Theory),Income Tax Authorities :Organization structure of Income Tax Authorities /Administrative and Judicial Originations)Central Board of Direct Tax (Functions and powers of various Income Tax Authorities)

References:

1. Indian Income Tax Act. Vinod Singhania Latest edition (2018)

2. Students guide to Income Tax. Dr.Vinod Singhania

3. Income Tal. Ahuja and Gupta, Bharat Prakashan.

4. Income Tax. Manoharam.

5. Indian Income Tax Act.H.C.Malhotra

6. Income Tax Act. R.N.Lakhotia

7. Practical Approach to Income Tax-Girish Ahuja and Ravi Gupta.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH305B	BUSINESS TAXATION	CO1	2	3	2	2	3	2	2	1	2	1	2	2	1	1
		CO2	2	2	2			3	2		2	2	2	1	1	1
		CO3	2	2	2		2	2	3		2	3	2	2	1	1
		CO4	3	3	2		2	2			2	2	2	1	1	1

Course Title/Code	**MERGERS AND ACQUISITIONS/MCH306B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0

Credit	3
Course Objectives	To understand the basic concepts, theories of Mergers and Acquisitions.

Course Outcomes (COs)		Mapping
CO1	To understand the basic concepts, theories of Mergers and Acquisitions.	Employability
CO2	To be able to understand the practical handling of cross border/ Cross-culture M&A and its taxation issues.	Skill Enhancement
CO3	To identify and interpret the different types of Mergers & Acquisitions, its legal implications and Anti-takeover strategy	Employability
CO4	To understand the practical aspect of Post-Merger Evaluation, Methods of Financing options and criterias for cracking a deal in a practical scenario.	Skill Enhancement
CO5	To apply theoretical knowledge in Deal Valuations and Evaluation of Merger and Acquisition through various methods.	

SECTION A
Mergers and Acquisitions: Introduction to mergers, types of mergers, theories of mergers & acquisitions; Cross-border mergers and acquisitions, issues and challenges in cross border M&A. Handling cross-culture and taxations issues in cross-border M&A. Analysis of Post-Merger Performance.

SECTION B
Demerger, types of demerger, reverse merger, buyback of shares, leverage buy-out strategy, merger strategy - growth, synergy, operating synergy, financial synergy, diversification. Takeover and its types, takeover strategy, takeover bids, legal framework for mergers and acquisitions, leverages and buyouts; Hostile tender offers and various anti-takeover strategies

SECTION C
Deal Valuation and Evaluation: Factors affecting valuation basics, methods of valuation, cash flow approaches, economic value added (EVA), sensitivity analysis, and valuation under takeover regulation, valuation for slump sale, cost-benefit analysis and swap ratio determination

SECTION D
Post-Merger Evaluation: Financial Evaluation of Mergers & Acquisitions, Impact on shareholders" Wealth; Methods of payment and financing options in mergers & acquisitions, financing decision, Merger, Acquisition and Competition law 2002, SEBI (Securities & Exchange Board of India) Takeover Code 2011 and criteria for negotiating friendly takeover.

References
1. Weston, Fred; Chung, Kwang S. & Siu, Jon A.: Takeovers, Restructuring and Corporate Governance, (2nd ed.). Pearson Education
2. Gupta, Manju (2010): Contemporary Issues in Mergers and Acquisitions. Himalaya Publishing
Readings:
1. Sudarsanam (2006); Creating Value from Mergers and Acquisitions, (1st ed.) Pearson Education
2. Ramanujan. S. (1999); Mergers: The New Dimensions for Corporate Restructuring, McGraw Hill
3. Narayankar, Ravi, (2013): Merger and Acquisitions Corporate Restructuring, Strategy and Practices, (2nd ed.). International Book House Pvt. Ltd.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2

		CO1	2	2	**1**	2	3	3	**2**	3	1	1	2	**1**		1	1
	MERGERS AND ACQUISIT IONS	**CO2**	1	2	1	3	3	2	X	2	X	1	3	X		1	1
		CO3	1	2	2	3	3	2	X	3	X	X	3	X		1	1
MCH306B		**CO4**	1	2	2	3	3	1	X	3	X	X	3	X		1	1

Course Title/Code	**New Age Entrepreneurship/MCH306B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To Understand the concept of New Age Entrepreneurship and its applicability in this business environment.

	Course Outcomes (COs)	Mapping
CO1	Understand the characteristics and importance of meaning & concept of New Age Entrepreneurship.	Entrepreneurship.
CO2	Understand and apply Venture Conceptualization and Business Planning to create a viable business.	Entrepreneurship.
CO3	Understanding & creating sectoral opportunities for viable enterprises	Entrepreneurship.
CO4	Understanding the alignment of Academics & Enterprise towards incubating ideas & actionable work for future.	Entrepreneurship.

Section-A

Definition, meaning & concept of New Age Entrepreneurship. Indian Society, Economy, Polity, and the Socio-Economic Context that impacts the basic model of Entrepreneurship. Advocacy and Networking for incorporating the dynamic

changes to the advantage of an Entrepreneur. Profile of a New Age Entrepreneur, and the approach to opportunities around. Strategic Innovation & New Age Entrepreneurship. New Age Entrepreneurship towards correcting market failures.

Section-B

Understanding the New Age Entrepreneurial Terrain: Sector Studies. Venture Conceptualization and Business Planning. Developing the Venture: Strategy & implementation. Venture Entry: Positioning the Firm for Financial and Strategic Advantage. Funding of Ventures/Enterprises in the New Age Economy & Industry 4.0. Marketing & risk management of enterprises.

Section-C

New Age Entrepreneurship & Successful Models: Learning from real life Enterprises. Leadership & change. Understanding & creating sectoral opportunities for viable enterprises. In the Social sector, Science and Technology: Design thinking and New Age Innovation. Analysis of New Age Entrepreneurial Models of Flipkart, PayTM, Ola Cabs, Zomato, Swiggy etc

Section-D

Business Ethics, Corporate Governance and Corporate Social Responsibility. Disruptive Innovations and Strategies for Scaling Business Impact. Understanding Startup ecosystem & return on Investment. Estimating Value Creation and Business Model Innovation using value proposition equations in new age dynamics. Understanding the alignment of Academics & Enterprise towards incubating ideas & actionable work for future

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH306B	New Age Entrepreneurship	CO1	2	3	1	1	3	1	1	1	2	1	2	2		2	2
		CO2	2	3	1	1	3	1	1	1	2	1	2	1		2	2
		CO3	2	3	1	2	3	1	1	1	2	2	3	1		2	2
		CO4	2	3	1	2	3	1	1	1	2	1	3	1		2	2

Course Title/Code	**INTERNATIONAL FAMILY BUSINESS MODELS /MCH339B**
Course Type:	Core (Departmental)

	Course Nature:	Hard
	L-T-P Structure	3-0-0
	Credit	3
	Course Objectives	Understand the concept of Family Business Models, its design and innovation and the related challenges.

	Course Outcomes (COs)	Mapping
CO1	Understand the Importance and Characteristics of Family Business.	Entrepreneurship.
CO2	Understand and apply the Concept of 3 Circle Model of Family business and the how each of the circle corresponds to different life cycle of stages of growth	Entrepreneurship.
CO3	Understand the concept of Design thinking and Innovation	Entrepreneurship.
CO4	Understanding the challenges entrepreneurial family businesses encounters	Entrepreneurship.

Section A

Family Business: Importance and Characteristics of Family Business, Importance of crafting and selecting business models; 3 Circle Model of Family Business, strategies of family business in the process of internationalization, strategies of family business in the process of internationalization.

Section B

Three phases of Family Business : operating in a domestic market and get prepared for a foreign market, selecting the right model of internationalization and selecting the right strategy of internationalization

Section C

Conceptual Model, Network Theory, International Entrepreneurship Theory, Models of Internationalization. Design thinking and Innovation, five models of ownership: owner/operator, partnership, distributed, nested, and public.

Section D

Challenges entrepreneurial family businesses encounter after the discovery of opportunities outside its domestic market. Understanding foreign markets; the different entry modes for international expansion; the strategies to adopt and the involvement of the family to support the expansion.

Text Book

Ernesto J. Poza and Mary S. Duagherty(2015) Family Business, Cengage Learning, New Delhi.

Gersick, K.E., Davis, J.A., Hampton, M.M., & Lansberg, I. (1997). Generation to Generation: Life Cycles of the Family Business. Harvard Business School Press.

References:

Bork, Jaffe, Lane, Dashew, Heisler (1996). Working with family businesses: A guide for professionals. Jossey Bass Publishers.

Collier, C.W. (2002). Wealth in families.Harvard University.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH339B	International family business models	CO1	2	3	1	1	3	1	1	1	2	1	2	2	1	1
		CO2	2	3	1	1	3	1	1	1	2	1	2	1	1	1
		CO3	2	3	1	2	3	1	1	1	2	2	3	1	1	1
		CO4	2	3	1	2	3	1	1	1	2	1	3	1	1	1

Course Title/Code	<mark>**HEALTH CARE INSURANCE & MANAGEMENT CARE/ MCH310B**</mark>
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To understand the healthcare insurance and related legal provisions in India

Course Outcomes (COs)		Mapping
CO1	Develop a practical understanding of Health Insurance and Health insurance Schemes in India.	Employability

CO2	Demonstrate the Need, importance and use of Health Insurance Underwriting.	Skill Enhancement
CO3	Identify the Role of Third Party Administrators in Health Insurance Claims	Employability
CO4	Explain the concept of Claims Management and Health Insurance Frauds and Customer Service in Health Insurance	Skill Enhancement
equisites if any)		

SECTION A

Introduction of Health Insurance Meaning, Concept, history, current scenario and future of Health Insurance India, Health Insurance regulation in the Indian Context- Health Insurance regulations (2013 & 2016), Definition of common terminologies. New developments in HealthInsurance in India, digital distribution channel in health insurance. Health Insurance Products India Various policies issued in Health Insurance- Concept and features of Mediclaim – Individual andFamily floater, Overseas Mediclaim policy, Disease Specific products, Government Sponsored Health Insurance Scheme in India- RSBY & Ayushman Bharat., Critical illness policy. Health Insurance proposal form, policy clauses, Preventive care and wellness program

SECTION B

Health Insurance Underwriting Need for underwriting, Risk identification, Risk classification,evaluation and risk management in health insurance ,Underwriting medical risk factors, Methods of underwriting- judgment and numerical rating methods, underwriting manuals, Financial underwriting and medical underwriting, tele underwriting, Genetic Underwriting, Role of IT in health insurance underwriting, Portability benefit.

SECTION C

Role of Third Party Administrator and Group health Insurance Regulations of IRDA (TPA – Health Services Regulations), 2001. Scope of relationship between insurer and TPA. TPA's relationship with customers and hospitals for effective claim settlement. TPA role in claim settlement and reducing frauds, Current scenario and future of TPA in India. Group Health Insurance Guidelines.

SECTION D

Claims Management Intimation, admissibility, payment procedure and documents required for claims settlement in health insurance. Role of different stakeholders in the claim settlement process in health insurance. Reasons and solution for high claim ratio, Role of IT in health insurance claims management. Health Insurance Frauds and Customer Service in Health Insurance Fraud and abuse in health insurance, Classification of frauds, Stages of frauds in health insurance, parties involved in frauds, triggers, causes, effects and remedial measures to control fraud. Customer protection, Expectations and drawbacks in customer service, Grievance redressal.

References: 1. Balachandran, S (2010): Managing Change, Sangeeta Associates, Mumbai. (All Modules) 2.Gopalakrishna, C (2011): Social Security, Insurance and the Law - Shroff Publishers and Distributors, Mumbai. (All Modules) 3. Kumar, Dharmendra (2011): Thresholds in Indian Insurance - Macmillans (All Modules) 4. Noussia, Kyriaki (2007): History, Evolution and Legislative Framework of Marine insurance.(Module-1) 5. Planning Commission (2008): A Hundred Small Steps, Sage publications. (Module - 2) 6. Samarth, R. D. (1998): Operational Transformation of General Insurance Industry during the period 1950 to 1990 & Beyond (All Modules)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH310B	HEALTH CARE INSURANCE & MANAGEMENT CARE (HCM)	CO1	2	2	3	X	2	2	2	2	2	1			1	1
		CO2	3	2	X	X	3	2	2	2	2	2			1	1
		CO3	3	2	X	X	2	2	2	2	2	2			1	1
		CO4	2	2	X	X	2	3	2	2	2	2			1	1

Course Title/Code	**QUALITY ASSURANCE IN HEALTHCARE/MCH311B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To understand the concept of Quality & have clarity on the difference between Quality Control and Quality Assurance

	Course Outcomes (COs)	Mapping
CO1	To understand the concept of Quality & have clarity on the difference between Quality Control and Quality Assurance	Employability
CO2	To understand Standards and their importance & tools for Monitoring Quality & TQM	Skill Enhancement
CO3	To understand the role of healthcare managers in QA implementation and managing change.	Employability
CO4	To gain knowledge about the Accreditations in Quality in Healthcare & Quality with Public Health Perspective	Skill Enhancement
equisites if any)		

SECTION A

Concepts of Quality, Quality Control and Quality Assurance

SECTION B

Organizational Levels for setting up a Quality Assurance System

SECTION C

Standards and their importance/ tools for Quality monitoring and TQM

SECTION D

Role of healthcare managers in Quality Assurance implementation and Managing Change

References

1. Michael Merson, Robert Black, Anne Mills. Global Health: Diseases, Programs, Systems and Policies. Copyright 2012. (Jones & Bartlett)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH311B	QUALITY ASSURANCE IN HEALTH CARE	CO1	3	2	2	2	1	x	1	1	2	1	2	x		1	1
		CO2	2	2	1	2	1	x	1	2	2	1	2	x		1	1
		CO3	2	2	2	1	1	x	1	2	2	1	2	x		1	1
		CO4	3	2	2	3	1	x	1	2	2	1	2	x		1	1

Course Title/Code	**LEGAL AND ETHICAL ASPECTS OF HEALTHCARE/ MCH312B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To provide an overview of major issues related to the design, function, management, regulation, and evaluation of health insurance programs and managed care organizations, including HMOs.

	Course Outcomes (COs)	Mapping
CO1	To understand the basics of Health Care laws and role of health policy and Health Care Centres	Employability
CO2	To acquaint the students with Human Rights. Rights & Duties of Health Care Provider and the Health Care legislations & Regulations	Skill Enhancement
CO3	To analyze and understand the general and specific laws of Health care and the contemporary challenges in health sector	Employability
CO4	To understand Medical Ethics, Contract Act and Consumer Protection Act and to understand the Importance of Medical Insurance, Medical Insurance Regulations and Mediclaim Policies of Healthcare Organizations.	Skill Enhancement

SECTION A

Basic of Health and its provider. Origin & Evaluation. All Council Acts. Need for Health Law – Fraudulent, Negligence and Abuse. Role of Health Policy & Health Care Delivery. Hospital and Health Care Management.

Human Rights. Rights & Duties of Health Care Provider (Public & Private Activities). Functions and Interaction between court Legislation and Regulations

General Laws on Health Law (Medical Allied Agencies). Specific Laws on Health Law (NDT, PWD/etc).Contemporary challenges in Health Laws. Euthanasia and MTP (Medical Termination of Pregnancy).
.

Medical Ethics. Contract Act and Consumer Protection Act in the Healthcare Sector. Medical Insurance- Introduction – Various types , Significance and Kind of Medical Insurance/Policies. Medical Insurance Regulations. Mediclaim Policies and TPA.

References:
1)Jonathan Herring- Medical Law and Ethics
 2)Mason and McCall Smith- Law and Medical Ethics
3)S. V. Jogarao- Current Issues in Criminal Justice and Medical laws.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH312B	LEGAL & ETHICAL ISSUES IN HEALTH CARE	CO1	2	2	1	1	3	2	1	3	1	1	3	1		1	1
		CO2	2	2	1	1	3	2	1	3	1	1	3	1		1	1
		CO3	2	2	2	1	3	2	1	3	X	1	3	1		1	1
		CO4	2	2	2	2	3	2	1	3	1	2	3	2		1	1

Course Title/Code	LOGISTICS AND INTERNATIONAL SUPPLY CHAIN MANAGEMENT/MCH313B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3

	Course Objectives	To familiarize the students with the essential elements of Logistics and Supply Chain Management. Strategic issues in the International Supply Chain Management and logistics network. Configuration along with performance measurement and evaluation shall be studied thoroughly.

	Course Outcomes (COs)	Mapping
CO1	To understand the Logistics Network Design for Global Operations	Employability
CO2	To understand Performance Measurement and Evaluation in Global Logistics.	Skill Enhancement
CO3	To study and analyze Key Activities Performance Information, Measuring Performance in Functional Integration, Measuring Performance in Sectoral Integration, Supply chain operations reference model (SCOR) Model	Employability
CO4	To analyze the Global Supply Chains and their societal, business, and cultural contexts and impacts Global Supply Chains and their societal, business, and cultural contexts and impacts	Skill Enhancement

SECTION A

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

Management, Issues in Supply Chain Management; Managing networks and relationships;

Sourcing Internationally, International Distribution Management: Types of Intermediaries,

Channel Selection and Management.

SECTION B

Strategic issues in Supply Chain – Strategic Partnership, Logistics Management: Concept,

Objective and Scope, Transportation, Warehousing, Inventory Management, Packing and

Unitization, Control and Communication, Role of Information Technology in Logistics, Logistics

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

SECTION C

Logistics Network Design for Global Operations Global Logistics Network Configuration,

Orienting International Facilities: Considerations and Framework, Trade-offs Associated with

each Approach, Mapping the different Approaches, Capacity Expansion Issues; Information

Management for Global Logistics: Characteristics of Logistics Information and

Telecommunication Systems, Capabilities and Limitations.

SECTION D

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

References:

1. Rushton, A., Croucher, P. and Peter Baker. Handbook of Logistics and Distribution Management. Kogan Page Pub

2. Chopra Sunil and Peter Meindl. Supply Chain Management. Pearson Education

3. Bowersox, D. J., David, J and Cooper. Supply Chain Logistics Management. McGraw Hill

4. Heizer, Jay; Render, Barry. Operations management. Sustainability and supply chain management. Pearson Publication, India

5. Sahay, B S. Supply chain management for global competitiveness. Delhi: Macmillan Publishers India Limited. (Latest Edition may be used)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH313B	LOGISTICS AND INTERNATIONAL SUPPLY CHAIN MANAGEMENT	CO1	3	3	3	2	1	1	1	2	1	1	2	1		1	1
		CO2	3	3	2	2	1	1	1	2	1	1	2	1		1	1
		CO3	3	3	3	2	1	1	1	2	1	1	2	1		1	1
		CO4	3	3	2	1	1	1	1	2	1	1	2	1		1	1

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

	Course Outcomes (COs)	Mapping
CO1	To get the students acquainted with concepts and application of the purchasing and inventory management	Employability
CO2	To acquaint students with the need and management of inventory in supply chain management.	Skill Enhancement
CO3	To acquaint students with the management of inventory in supply chain management.	Employability
CO4	To acquaint students with the decision making in purchasing, vendor management	Skill Enhancement

SECTION A

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

SECTION B

Suppliers Selection, Vendor Rating and Vendor Rating Techniques, Vendors Development and Vendors' Relationship management. Inventory Management: Different Costs of Inventory, Optimal Order Quantity, EOQ, Inventory Models with Purchase Discounts, Buffer Stocks, Fixed Order Period Model, Safety Stocks, Optimum Level of Safety Stock.

SECTION C

Inventory Control, Elements of Effective Inventory Control, Advantages, Procedure for Setting up an Efficient Inventory Control System, V.E.D. Analysis, S.D.E. Classification, F.S.N. Analysis, X.Y.Z. Analysis, Logistics Management and Its Link with Inventory Control and other Areas.

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

SECTION D

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

Evaluation of Materials Management: Organization, Difficulties, Process and Criteria, Reporting and Purchasing.

Computers in Material Management Electronic Computer, Integrated Computer System for Materials Management, Material Planning.

References:

1. Ansari A and Murderess B., JIT Purchasing, Free Press.

2. Baily P. et al, Purchasing Principles and Management. Pitman.

3. Burt, David N., Proactive Procurement, Englewood Cliffs, Prentice Hall Inc.

4. Dobler, D W. et al, Purchasing and Materials Management,. McGraw Hill.

5. Dutta, A K., Integrated Materials Management, PHI Learning.

6. Farrington B and Waters, Derek W., Managing Purchasing, Chapman & Hall.

7. Gopalakrishnan P and Sunderashan M., Handbook of Materials Management, PH

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH314B	PURCHASING AND INVENTORY MANAGEMENT	CO1	1	2	2	X	3	2	X	1	X	2	1	1		1	1
		CO2	2	X	3	2	2	3	X	3	2	X	2	2		1	1
		CO3	X	2	2	2	x	1	3	X	2	X	2	2		1	1
		CO4	2	X	X	3	2	3	2	2	3	3	2	2		1	1

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

	Course Outcomes (COs)	Mapping
CO1	Understand the fundamental concepts and techniques of service Operations management	Employability
CO2	Examine various ways of managing the service operations	Skill Enhancement
CO3	To analyze the operational management issues and problems and solve them	Employability
CO4	Develop the ability to optimize the service operations for business	Skill Enhancement
equisites if any)		

SECTION A

Matrix of Service Characteristics; Taxonomy of services, Challenges in

Operations Management of Services, Aggregate Capacity Planning for Services; Facility Location; subjective and objective factors.

SECTION B

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

SECTION C

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

SECTION D

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

References:

1. Bowen, D. E., Chase, R. B., & Cummings, T. G. (Eds.). (1990). Services management effectiveness (2nded.). San Francisco: Jossey Bass.

2. Fitzsimmons, J. A., & Fitzsimmons, M. J. (2004). Service management (4th ed.). New Delhi: McGraw Hill.

3. Haksever, C., Render, B., Russell, R. S., &Murdick, R. G. (2003). Service management and operations, (2nded.). New Jersey: Prentice Hall.

4. Heskett, J. L., Sasser, W. E.,& Hart, C.W.L. (1990). Service breakthroughs: changing the rules of the game. New York: FreePress.

5. Martin, C. (1998). Logistics and SCM: Strategies for reducing cost and improving service. New Delhi: Pearson Education.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH315B	SERVICES OPERATIONS MANAGEMENT	CO1	3	2	3	1	x	3	x	3	1	1	2	1	1	1
		CO2	3	3	3	3	2	2	2	3	2	1	2	2	1	1
		CO3	2	3	3	2	2	1	2	2	2	1	3	2	1	1
		CO4	3	3	3	3	x	2	3	3	2	1	2	2	1	1

Course Title/Code	**HR Analytics/ MCH340B**
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P Structure	2-0-2
Credit	3
Course Objectives	To understand application of human resource data, analysis and making interpretations and decision making based on it.

	Course Outcomes (COs)	Mapping
CO1	To demonstrate theory, concepts, and business application of human resources research, data, metrics, systems, analyses, and reporting.	Employability
CO2	To Build an understanding of the role and importance of HR analytics, and the ability to track, store, retrieve, analyze and interpret HR data to support decision making	Employability
CO3	Ability to use appropriate software to record, maintain, retrieve and analyze human resources information (e.g., staffing, skills, performance ratings and compensation information).	Employability
CO4	Apply quantitative and qualitative analysis to understand trends and indicators in human resource data & Demonstrate how to connect HR results to business results	Employability
equisites if any)		

SECTION – A

Introduction to HR Analytics: Evolution of HR Analytics, HR information systems and data sources, HR Metric and HR Analytics, Evolution of HR Analytics; HR Metrics and HR Analytics; Intuition versus analytical thinking; HRMS/HRIS and data sources; Analytics frameworks like LAMP, HCM:21(r) Model.

SECTION B

Diversity Analysis: Equality, diversity and inclusion, measuring diversity and inclusion, Testing the impact of diversity, Workforce segmentation and search for critical job roles

SECTION C

Recruitment and Selection Analytics: Evaluating Reliability and validity of selection models, Finding out selection bias, Predicting the performance and turnover. Performance Analysis: Predicting employee performance

SECTION D

Training requirements, evaluating training and development, Optimizing selection and promotion decisions Monitoring impact of Interventions: Tracking impact interventions, Evaluating stress levels and value-change. Formulating evidence-based practices and responsible investment. Evaluation of mediation process, moderation, and interaction analysis

Courses Code	Courses	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	P0 11	PO 12		PS O1	PS O2
MCH340B	HR Analytics	CO1	2	3	2	3	2	X	2	3	2	2	X			1	1
		CO2	2	3	2	2	2	X	3	2	2	2	X			1	1
		CO3	3	3	3	3	2	X	3	2	3	2	X			1	1
		CO4	3	3	3	3	3	X	3	3	3	3	X			1	1

Course Title/Code	<mark>SOCIAL MEDIA ANALYTICS/ MCH341B</mark>
Course Type:	Elective(Departmental)
Course Nature:	Hard
L-T-P Structure	2-0-2
Credit	3
Course Objectives	The objective of this course is to acquaint the participants with decision making in planning, design, delivery, quality, and maintenance and scheduling of service operations on a global basis. The participants are also expected to appreciate the role of service quality and supply chain in the emerging service economy of India in relation to international business. Environment and global benchmarks.

Course Outcomes (COs)		Mapping
CO1	To give an overview & Conceptual understanding about Social Media	Employability

	Dimensions	
CO2	To Demonstrate the Understanding of Mobile analytics ,Natural Language processing with Mobile Analytics .	Employability
CO3	To understand the various Parameters of Text Analytics,their sources ,Patterns and trends in order to be Industry ready	Employability
CO4	To Demonstrate the understanding of Big Data, Predictive Analytics, Machine Learning ,IOT & Artificial Intelligence as per Industry 4,0	Employability
equisites if any)		

Section I

Overview- Social Media, On-Line Social Network, Off-Line Social Network, Metrics and Measurement, Dashboard, Target Audience, Desired Action, Content, Market Research Online Communities, Cluster Analysis, Conjoint Analysis, Multidimensional Scaling, Social Media Listening, Social Media Scoring, Social Media Modelling.

Section II

Mobile AnalyticsUnderstanding Mobile Analytics Concepts, difference between Mobile Analytics and Site Analytics, Natural language Processing with Mobile Analytics, Text Mining for Mobile Analytics, Mobile Analytics Tools, Churn Analytics.

Section III

Text Analytics- Text Data, Sources of Text Data, Information Clusters, Patterns, Trends, Tagging, Natural Learning Process, Lexical Analysis, Social Network Nodes, Linkage Structure, Node Labeling, Content-Based Classification, Word Stemming, Stemming Algorithms, Polarity of the Attitude, Psychological Profiling, Sentiment Analysis.

Section IV

Web Scraping- Web Scraping of unstructured data, Gathering data from HTTP and HTTPS format, Web Scraping from XML and JSON file, Regular expressions, Extraction Strategies, Term Document Matrix, Data Cleansing, Data Manipulation and Data Transformation after Scrapping.

Future of Analytics- Introduction to Big Data, Predictive Analysis for Business, Social Information Processing and Distributed Computing, Advances in Machine Learning, Traditional Data Models Evolve, Analytics to Solve Social Problems, Location Based Data Explosion, Data Privacy Backlash, Internet of Things, Artificial Intelligence

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH 341B	Social Media Analytics	**CO1**	3	2	2	2	2	X	3	2	2	2	X		1	1
		CO2	3	3	3	2	2	X	3	2	2	2	X		1	1
		CO3	3	3	3	3	2	X	3	2	3	2	X		1	1

		CO4	3	3	3	3	3	X	3	3	3	3	X		1	1

Course Title/ Code	Cyber Law (LWS323)
Course Type:	Elective
Course Nature:	Soft
L-T-P-O Structure	(2-0-0-0)
Objectives	The Objective is this paper is to focus on basic concepts of Cyber Law relevant for understanding evolution of Cyber law and its conformity in any changing society.

CO	CO STATEMENT	Mapping
LWS323.1	Describe the concept of Cyber crimes and cyber Law	Employability/Skill
LWS323.2	Critically analyze the problems arising out of online transactions and find solutions	Employability/Skill
LWS323.3	Identify Intellectual Property issues in the cyber space and apply relevant laws to protect or fight infringement	Employability/Skill
LWS323.4	Critically analyze various sections of the Information Technology Act 2000 to apply such laws appropriately	Employability/Skill

Section A

Computer and its impact in society:- (Contact Hours - 4)

    A. Need for Cyber Law in the 21st Century.
    B. Development of Cyber Law in India.

Section B

Privacy Issues & Access Rights :- (Contact Hours -6)

    A. Freedom of speech and expression in Cyberspace.
    B. Right to Privacy and Right to Data Protection.

Section C

Cybercrimes and Legal framework:- (Contact Hours -3)

    A.   Kinds of Cyber Crimes: Hacking, Digital Forgery, Phishing, Spam, Malware etc.
    B.   Cyber Stalking, Cyber Pornography, Cyber Vandalizing etc.
    C.   Concept of Property in Cyberspace.

<div align="center">

Section D

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Information and Technology Act & Intellectual Property Rights :- (Contact Hours - 3)

    A. Historical Background & Objectives etc.
    B. Legal Recognition of Electronic Record & Procedures.
    C. Offences and Penalties etc.

Tutorial activities 1 Hr/Week

- Quiz on Cyber Law and Cyberspace

- Discussion on Different types of Cyber Crimes and its negative effects on the Society

- Study about the various implementations of Information technology act,2000

- Any other suitable activity

Reference Books:

1. Cyber Law - Law of Information Technology and Internet – Anirudh Rastogi
2. Cyber Law in India(Law on Internet) – Dr. Farooq Ahmad

Course Outcome:-

1. The student will be able to understand the concepts and development of Cyber law in India.

2. The student will be able to examine the practical aspect of the existence of Cyber Crimes from Historic to Present Phase.
3. The Student will try to understand and deduce the various factors attributing to the rise of Cyber Crime and its impact on society.
4. The Student will understand the development of Legal Reforms in Present day society and what factors impact such legal reforms.

Course Outcomes	Program Outcomes												Program Specific Outcomes	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
LWS323.1	2	1	-	-	-	-	2	-	-	1	-	3	-	-
LWS323.2	3	2	-	-	-	-	-	-	2	-	-	1	-	-
LWS323.3	3	1	2	-	-	-	-	1	-	-	-	2	-	-
LWS323.4	3	1	-	-	-	-	-	-	-	-	-	3	-	-

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

CO	CO STATEMENT	Mapping
LWS325.1	Understand the basics of Intellectual Property Rights	Employability/Skill
LWS325.2	Categorize different types of intellectual properties	Employability/Skill
LWS325.3	Recognize the crucial role of intellectual property in different industries.	Employability/Skill

LWS325.4	Understand the procedural aspect pertaining to application and grant of patent, trademark, geographical indication etc.	Employability/Skill

Section A
Introduction to IPRs and Trademark and Trade Secrets (Contact Hours 4)
1. Introduction to various types of IPR Laws
2. Protection of Trademarks under Trade Marks Act – Basic legal Framework
3. Trade Secrets and protection thereof

Section B
Protection of Copyright, Traditional Knowledge, Design and Integrated Circuits (Contact hours 4)
1. Legal Framework relating to Copyright protection in India
2. Protection of Industrial Designs under Designs Act
3. Protection of integrated circuits

Section C
Law relating to Patents (Contact Hours - 4)
   a. Legal Framework for registration and protection of patents and related rights

Section D
IT Law and Cyber Offencesand other IPRs (Contact Hours – 4)
1. Introduction to Information Technology Act, 2002
2. **Cyber** Offences
3. Geographical Indicators and PPVFBR

Tutorial activities 1 Hr/Week
1. Statutes and Case Laws
2. Case studies from India and abroad

Course Outcomes	Program Outcomes													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	P014
LWS325.1	-	3	-	3	-	3	-	-	-	-	-	-	-	-
LWS325.2	-	3	-	3	-	3	-	-	-	-	-	-	-	-
LWS325.3	-	3	-	3	-	3	-	-	-	-	-	-	-	-
LWS325.4	-	3	-	3	-	3	-	-	-	-	-	-	-	-

Course Title/ Code	**Essentials of Peace and Sustainability**
Course Type:	**Elective (Allied)**
Course Nature:	Soft
L-T-P-O Structure	(1-0-2-0)

Course Objective

To make participants understand the philosophical underpinnings of "Peace" at Self, Society, Nation and Global level. The course aims at sensitizing participants on aspects of building and maintaining Peace in the World through Sustainable Development and creating a mindset to acknowledge the importance of Peace through Collaborative and sustained efforts in personal, social, economic and governance. The course develops sound concepts which participants are made to apply through a series of Projects, Assignments, Group Work and Seminars and helps participants' growth into "Ambassadors of World Peace as Digital Professionals and sensitive Global Social beings".

Course Structure (Overall Outline)

Blended mode:

·   **Online mode: 30%**

·   **Classroom work: 30%**

·   **Field work:40%**

Course 1: Essentials of Peace and Sustainability

Learning outcomes

After completing this course, the students will be able to

1. Comprehend concept of "Peace and sustainability" and inter linkages

2. Discuss relevance of sustainable development goals to attain Peace

3. Recognize how peace addresses sustainable development goals

4. Construct thoughts and philosophies of Peace Advocacies

5. Compare various Perspectives on Peace

6. Be able to Choose appropriate strategy to face challenges to peace

7. Appreciate different kinds of thoughts in different contexts with reference to peace

8. Summarize understanding of peace based on various perspectives

9. Make decisions in personal, social and professional life aligning to inner peace

10. Envision impact of individual action on society and nation and globe as a whole

11. Develop culture of following netiquettes of a peace loving citizen in digital era

12. Understand the political, economic, socio-cultural conflict & ecological conflict

Section A: Basic understanding of Peace and Sustainability

i. Concept of Peace and Approaches to Peace

ii. Understanding peace from a different perspective: Self, Local Community, National and Global.

iii. Concept of Sustainability and Sustainable Development Goals (2030) as drivers of sustainable, health and social initiatives

iv. Why Sustainability

Assignment:

· Document analysis of Sustainable development goals agenda

· Creative expression based on sustainable development goals

Section B:

i. **Understanding thoughts on Peace**
   a) Study of relevant extracts from the writings of Indian thinkers: Gandhi, Tagore, Sri

Aurobindo, Vivekananda
   b) Western thinkers: Russell, Iqbal, Dalai Lama, Nelson Mandela
   (Please follow Annexure A-reading references)

Assignment:
   · *Panel discussion by students*
   · *Discussion forums on different aspects of Peace*

Section C: Understanding challenges to peace

i. Challenges to peace-stress, conflicts, crimes, terrorism, violence and wars

ii.   Ongoing conflicts in the political, economic, socio-cultural and ecological sphere at national and international level

iii.   Impact of media- The use of perspective, symbols, stereotypes, and rhetoric in analyzing communication and representation of contentious issues in television and other modern media.

Assignment:

·   Case study analysis

Section D: Peaceful and Sustainability conscious individual

Being "Peace Ambassador"

i. Role of self in reducing prejudices, biases and stereotypes, nurturing positivity, making choices in response to crises in personal, social and professional life

(These topics should be covered through games and activities)

1.   Developing Core competencies and life skills: Negotiation Rational thinking, System thinking, conflict resolution

(These topics should be covered through workshops)

2.   Cultivating the skills necessary for peace: Introspection and reflective thinking, Mediation, Dialogue

(These topics should be covered through experiential learning through training and practices)

Assignment

·   *Reflective journaling*

Being Sustainability conscious individual

- 3As of Sustainable development goals oriented initiatives: Awareness, Appreciation, Action
- Power of One
- Role of Organizations, NGO and Government
- Role of technology –Digital literacy and media literacy

Assignment

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

Some of the suggested areas (But not limited to)

- *Gender stereotyping*
- *Gender equality*
- *Quality education*

- *Carbon footprints*
- *Ecological footprints*
- *Water crisis*
- *Wastewater management*
- *Climate change*
- *Biodiversity*

Course Title/Code	APPLIED PHILOSOPHY (EDS288)
Course Type	Elective (Allied)
Course Nature	Soft
L-T-P-O Structure	(1-0-2)
Objectives	To enable students to - confront the philosophical problems implicit in the experience of self, others and the society. - read critically the philosophy of influential philosophers with respect to society, Science and success in life - understand and apply concepts and theories of moral philosophy. - reflect philosophically and ethically on their own personal, professional and civic lives. -formulate for himself or herself a philosophy of life or world-view consistent with the objectives of liberal society.

	Course Outcome	Mapping
CO1	Analyze the philosophical problems implicit in the experience of self, others and the society	Employability/skill
CO2	Explain the philosophy of influential philosophers with respect to society, Science and success in life	Employability/skill
CO3	Demonstrate the understanding of the concepts and theories of moral philosophy.	Employability/skill

Co4	Reflect philosophically and ethically on one's own personal, professional and civic lives.	Employability/skill
CO5	Formulate a philosophy of life or world-view consistent with the objectives of liberal society.	Employability/skill

SECTION A

INTRODUCTION TO PHILOSOPHY: Philosophy: Meaning, Nature and Scope, Practical uses of Philosophy, Branches of Philosophy.

SECTION B

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

SECTION C

PHILOSOPHICAL PERSPECTIVES OF SOCIO-POLITICAL SCENARIO IN INDIA: Nature of Democracy and its implications, Meaning and requirements of National Integration, Universal Human Rights

SECTION D

PHILOSOPHICAL PERSPECTIVES OF RELIGIOUS SCENARIO IN INDIA: Secularism—its nature and implications, Moral Philosophy of religion with special reference to Hinduism, Jainism, Buddhism, Islam, Christianity, Sikhism. Religious pluralism and Religious tolerance.

Reference Books and Readings:

1. Bhatia, K. & Bhatia, B. (1974) The Philosophical and Sociological Foundations of Education. Delhi: Doaba House.
2. Brubacher, John. S. (1969). Modern Philosophies of Education, New Delhi: Tata McGraw-Hill
3. Dewey, J. (1966). Democracy in Education, New York: Macmillan.
4. Ferre, F.(1995). Philosophy of Technology. University of Georgia Press.
5. Gandhi, M. K. (1956). Basic Education. Ahmedabad, Navajivan.
6. Goel, A. & Goel S. L. (2005). Human values and Education. New Delhi: Deep and Deep Publications Pvt. Ltd.
7. Palmer, Joy A. et.al. (2001). Fifty major thinkers on education from confucius to Dewey. New Delhi: Rutledge.
8. Rajput, J.S. (2006). Human Values and Education. New Delhi: Paragon Publications.
9. Walia, J.S. (2011). Philosophical, Sociological and Economic Bases of Education.

LAB: (EDS288)

1. Prepare and present a report on 'philosophy of life' from the perspective of a young adult.
2. Quiz and interactive sessions on various philosophical perspectives of contemporary philosophers.
3. Organization of and participation in street plays /dramas/ declamation/ debates/ any other suitable activity on any theme of Philosophical perspectives of Socio-Political scenario in India.
4. Group discussions on any suitable topics concerning contemporary society like aggression among youth, Over-ambitiousness in young generation, misuse of democracy, implications of secularism etc. and to reflect upon different viewpoints.
5. Preparation of quotation boards to display quotes of great philosophers in the college premises.
6. Picture interpretation and philosophical reflection on social themes like juvenile crime, begging in India, Social networking etc.
7. Readings from the autobiographies and other publications of great philosophers e.g. 'Wings of Fire' followed by discussion sessions.
8. Showing Videos on Unique personalities: life and philosophies followed by reflection exercises.
9. Any other suitable activity.

Course Outcomes	Program Outcomes												Program Specific Outcomes	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	-	-	-	-	-	-	2	2	-	-	2	-	-
CO2	-	-	-	-	-	-	-	3	2	-	-	2	-	-
CO3	-	-	-	-	-	-	-	3	2	-	-	2	-	-
CO4	-	-	-	-	-	-	-	3	2	2	-	2	-	-
CO5	-	-	-	-	-	-	-	3	2	2	-	2	-	-

Course Title/Code	Applied Psychology (EDS289)
Course Type	Elective
Course Nature	Soft
L-T-P-O Structure	(1-0-2-0)

Objectives	-To define psychology and its application across various fields. -To identify major attributes of Personality. -To conceptualize psychology in social and organizational settings. -To understand group dynamics. -To solve conflicts among the group.	

	Course Outcome	Mapping
CO1	develop critical thinking to understand the application of psychology CO2 identify the impact of Stereotyping, prejudice and discrimination in formation of attitude	Employability/skill
CO2	identify the impact of Stereotyping, prejudice and discrimination in formation of attitude	Employability/skill
CO3	Identify major attributes of Personality	Employability/skill
CO4	Explain Social Psychology and able to solve conflicts among the group	Employability/skill
CO5	Demonstrate group dynamics	Employability/skill
CO6	Analyze organizational Psychology and able to blend in work environment	Employability/skill

Section A

PSYCHOLOGY: ATTITUDE FORMATION

Psychology: Meaning, nature, Role of psychology across multidisciplinary aspects, Introduction: Stereotypes, Prejudice, and Discrimination, Introduction: Attitude, Formation of attitude, Aptitude

Section B

PERSONALITY AND PERSONALITY DEVELOPMENT

Definition of personality and its characteristics, Trait approach to personality (Big five theory of personality), Jung's Theory of personality

Section C

SOCIAL PSYCHOLOGY

Introduction to social identity, social cognition, and social influence, social conflicts and its resolutions, Group dynamics: Introduction, formation, types of groups, cooperation, competition, and conflict in groups.

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Course Title/Code	APPLIED SOCIOLOGY (EDS235)
Course Type	**Elective (Allied)**
Course Nature	**Soft**
L-T-P-O Structure	**(1-0-2)**
Objectives	1. To know and understand about the fundamental concepts of sociology and its applications. 2. To develop the analytical skills of students about ways in which social processes affect our everyday lives. 3. To understand the impact of various processes of social change and assess their impact on society. 4. To understand and analyze the social cultural dynamics that contribute to transformation of Indian reality 5. To study the various contemporary issues of society. 6. To develop basic research skills in the area of sociology.

	Course Outcome	Mapping

CO1	analyze the social cultural dynamics that contribute to transformation of Indian Society	Employability/skill
CO2	develop the necessary skills of social processes which affect our everyday lives.	Employability/skill
CO3	Analyze various contemporary issues of society and be able to provide solutions of social barriers and benefiting the masses.	Employability/skill
Co4	develop basic research skills in the area of sociology and help to find possible solution of specific social barriers of the society	Employability/skill

Section A

Introduction and Applications of Sociology:

- Society, Community, Social Institutions, Social Groups, Introduction to Applied Sociology
- Sociology and Social Processes
- Sociology and Social Change
- Sociology and Social Problems
- Clinical Sociology

Section B

Sociological Processes:

- Social Stratification, Social Mobility and their impact on society
- Socialization, Agents of Socialization, Assessing the effects of Socialization
- Social Movements: Concept, Impact of Environmental Movements in India: Chipko Movement, Narmada Bachao Andolan

Section C

Processes and Issues of Social Change:

- Social Change: Westernization, Urbanization, Privatization, Globalization, Sustainable development

- Issues in urban development-Population, poverty, unplanned growth and ecological issues

- Conflict management:
    - Intergroup: Causes, Resolutions
    - Organizational Conflict, Conflict Management and Grievance Handling

Section D

Field Survey & Report Writing:

- Need, Meaning of Survey

- Types of Survey

- Steps in Conducting Survey

- Data Collection Methods

- Salient Features of Report Writing

LAB:

1. Showing Videos on the life and philosophies of Famous sociologists and to acquaint the students about their different theories
2. Preparation of quotation board with the help of displaying the pictures and quotes of famous sociologists
3. Choose a theme of your interest‑ for e.g., crime, technology, environmental concerns or any other and look through the Sunday editorials of any national daily of the last 3 months to locate related articles.
4. Role Play: Gender issues in everyday life, students will form small groups and present skits to address this issue creatively; this will be followed by discussions.
5. Students may be given the assignment of taking proactive role in initiating social change in a local field
6. Visit a shopping mall and observe the interaction between employees and customers/visitors. Identify themes based on your observation and prepare a questionnaire based on this experience.
7. Look at a set of published letters of Gandhi, Nehru, C.F. Andrews and Tagore etc. and identify key social issues that are discussed in the contents of the letters and prepare a report on it.
8. Students will be asked to write a short essay on the pressures they feel of the experience in performing masculinity or femininity, Presentations and discussions based around the essays.
9. Debate or discussion on "Is the family the site of love and care" or "Is the family democratic?"
10. Discuss the impact of modernization, industrialization and globalization on day-to-today life.
11. Students may be asked to apply any applied research technique
12. Design a survey on factors affecting marriage choices of young people.
13. Any other suitable activity

References: Books and Readings

1. Andrew, W. (1997) Introduction to the Sociology of Development. New Jersey, Palgrave Macmillan.
2. Berg, L.B. (2001). Qualitative Research Methods for the Social Sciences (4th edition). Boston: Allyn and Bacon
3. Bhatia, H.(1970). Elements of Social Psychology. Bombay: Somaiya Publications Pvt Ltd.
4. Bhattacharyya D.K (2009). *Organizational Behavior*, Oxford University Press, UK.
5. Dastupta Driskle(2007) : Discourse on Applied Sociology Volume-II, 2007
6. Desai, B Sonalde et al. (2010). Human Development in India: Challenges for a Society in Transition. OUP
7. Deshpande, S.(2003). Contemporary India: A Sociological View. New Delhi: Viking.
8. Hall R.H (2009). *Organizational Structures, Processes & outcomes, Asia*: Pearson Education Publications.
9. Hodegetts R M. (2009). *Organizational Behavior*, Macmillan.
10. Mc Michael.P. (1996). Development and Social change: A global perspective. California Thousand Oaks.
11. Merton, R and Nisbet, (1976) Contemporary Social Problems, New York: Harcourt, Brace and World.
12. Metha, S. (2009). Women and Social Change, Jaipur: Sage.
13. Michael Edwards (2011). Civil Society in India, edited The Oxford Handbook of Civil Society, Oxford, Oxford University Press
14. Mitra et.al. (2009). Democracy, Agency and Social Change in India, New Delhi: Sage

15. Pratt henry Fairchild(2009) : Outline of Applied Sociology, 2009

16. Ranjit Kumar : Research Methodology, Pearson Education, Delhi.
17. Schaefer, R.T (2004). Sociology a Brief Introduction, (5th ed.) New York: McGraw-Hill Inc..
18. Sirclaus Moser & G. Kalton: Survey Methods in Social Investigation, Heinemann Educational Books, London.
19. Sanderson. (2010). Social Psychology, New York: John Wiley.
20. Tepperman, L. & Curtis, J. (Eds.) (2009). Principles of Sociology: Canadian perspectives. Don Mills, ON: Oxford University Press.
21. Young, K. (2001). Handbook of Social Psychology, London: Routledge and Kegal Paul Ltd.

Course Outcomes	Program Outcomes												Program Specific Outcomes	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1							1	2	2	2	-	2		
CO2							1	2	2	2	-	2		
CO3				1			1	2	2	2	-	2		

CO4			1		1	2	2	2	-	2		

SEMESTER - 6											
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MCH316B	E-COMMERCE	DMC	HARD	CORE	3	0	0	3	3
MCH317B	DIGITAL MARKETING	DMC	HARD	CORE	3	0	0	3	3
MCH318B	BUSINESS ANALYTICS	DMC	HARD	CORE	3	0	0	3	3
CSW331B	GOOGLE SUITES	CST	Workshop	CORE	0	0	3	3	1.5
FINANCE AND ACCOUNTS									
MCH320B	BEHAVIOURAL FINANCE	DMC	HARD	ELECTIVES	3	0	0	3	3
MCH335B	RISK MANAGEMENT IN BANKING SECTOR	DMC	HARD	ELECTIVES	3	0	0	3	3
MCH336B	FINANCIAL MODELING	DMC	HARD	ELECTIVES	3	0	0	3	3

Code	Course								
Entrepreneurship & Family Business Specialization									
MCH322B	STRATEGIES AND PRACTICES OF FAMILY OWNED ENTERPRISES	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH323B	COPYWRIGHT, PATENTS AND LAWS OF IPR	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH324B	ENTREPRENEURIAL FINANCE	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH325B	APPLIED ENTREPRENUERSHIP PROJECT	DMC	NTCC	ELECTIVE	0	0	16	16	8
Health Care Management Specialization									
MCH 327B	PUBLIC HEALTH	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH 329B	GLOBAL HEALTHCARE SCENARIO,	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH 330B	FINAL INTERNSHIP REPORT	DMC	NTCC	ELECTIVE	0	0	16	16	8
Operations Management									
MCH331B	INTRODUCTION TO SHIPPING	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH332B	MULTIMODAL TRANSPORTATION	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH333B	TRANSPORTATION AND DISTRIBUTION MANAGEMENT	DMC	HARD	ELECTIVE	3	0	0	3	3
MCH334B	APPLIED OPERATIONS MANEGEMENT PROJECT	DMC	NTCC	ELECTIVE	0	0	16	16	8
Business Analytics Specialization									
MCH342B	Machine Learning & AI	DMC	ELECTIVE	CORE	2	0	2	4	3
MCH343B	Supply Chain Analytics	DMC	ELECTIVE	ELECTIVE	2	0	2	4	3
MCH344B	Applied Project (Marketing, HR or Social Media analytics Based/Big Data or Digial Marketing	DMC	ELECTIVE	ELECTIVE	0	0	12	12	6
COURSES ARE OPTED DEPENDING UPON THE SPECIALIZATION CHOSEN BY THE STUDENT									

BBA- Sixth Semester

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

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamentals of ecommerce	Employability
CO2	To enable the students to understand various categories of ecommerce businesses	Skill Enhancement
CO3	To enable the students to take decisions on e-commerce business options	Employability
CO4	To enable the students about the security aspects of ecommerce	Skill Enhancement

SECTION A

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

SECTION B

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

SECTION C

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

<div align="center">

SECTION D

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Security and Legal Issues [8L] Cyber Fraud and solutions, Online Contracts, Digital Signatures, Digital Certificates, Concept of Encryption and Cryptography, Public and Secret key encryption, IT Act to legalize E-commerce, Taxation in relation to E-Commerce, Consumer Protection in Cyberspace.
Practical: [20L] Web site development & programming

References:

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH316 B	ECOMM ERCE	CO1	3	2	3	2	2	1	2	3	1	x	x	1		2	2
		CO2	2	2	1	2	2	3	2	1	3	1	x	x		2	2
		CO3	3	3	2	2	2	2	1	3	2	2	1	x		2	2
		CO4	2	3	3	2	3	2	3	1	2	3	2	1		2	2

Course Title/Code	**DIGITAL MARKETING/MCH317B**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To :understand the scope of digital marketing and how it integrates with overall business and marketing strategy globally

Course Outcomes (COs)		Mapping
CO1	To understand the scope of digital marketing and how it integrates with overall business and marketing strategy globally	Employability
CO2	To Assess various digital channels and understand which are most suitable to an idea or solution	Skill Enhancement

CO3	To Understand the fundamentals of a digital marketing campaign, and be able to apply it to achieve your business objectives	Employability
CO4	To understand to apply the categories of ecommerce businesses	Skill Enhancement
equisites if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH317 B	DIGITAL MARKETING	CO1	3	2	2	2	2	1	2	3	1	x	1	1		2	2
		CO2	2	1	1	2	1	2	2	1	3	1	2	1		2	2
		CO3	2	2	1	1	2	2	1	3	1	2	x	x		2	2
		CO4	2	3	3	2	3	2	3	1	2	3	1	1		2	2

Course Title/Code	**BUSINESS ANALYTICS/ MCH318B**

Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To understand the fundamentals of business analytics and articulate a business problem and convert it into a viable Analytics question

	Course Outcomes (COs)	Mapping
CO1	Understand the fundamentals of business analytics and articulate a business problem and convert it into a viable Analytics question	Employability
CO2	Use Descriptive analytics in Decision making and techniques of data mining	Skill Enhancement
CO3	Understand the fundamentals and applications of Data Science, Machine Learning , Artificial Intelligence & Big data	Employability
CO4	Apply knowledge to develop solutions across a range of Functional areas like Marketing Finance, HR and Operations	Skill Enhancement
equisites (if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

Time series analytics and forecasting, Application of Analytics: Retail, Marketing, Finance, HR & Web analytics
Tools: Python, R, Excel, SPSS

Text Books:

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

6. Business Analytics: The Science of Data - Driven Decision by U Dinesh Kumar
7. Fundamentals of Business Analytics" by R N Prasad and Seema Acharya

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

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH318B	Business Analytics	CO1	2	1	3	1	2	X	X	2	2	X	X	X		2	2
		CO2	2	2	3	2	3	2	1	2	3	X	X	X		2	2
		CO3	3	2	3	3	3	X	2	2	2	X	x	X		2	2
		CO4	2	1	3	3	2	X	2	3	3	X	x	X		2	2

Course Title/ Code	Google Suite (CSW331B)
Course Type	Core
L-T-P Structure	0-0-3
Credit	1.5
Objectives	The student will be able to ● Create and log into google account. ● Upload files and folders. ● Create and manage files and folders. ● Create Docs, Sheets, Slides (Presentation), and Forms (Survey) from Drive. ● Create and rename a document, spreadsheet, presentation, and survey. ● Format and edit a document, spreadsheet, presentation, and survey. ● Use symbols, images, and drawings in a document, spreadsheet, presentation, and survey. ● Share and review changes in a document, spreadsheet, presentation, and survey. ● Manage your Google Calendar, Add Events, Share Calendars, and such. ● Use Gmail to Attach Files from Drive, Save Attachments to Drive, much more

Course Outcomes (COs)		Mapping
CO1	Understand various components of Google suite	Skill Enhancement
CO2	Create, format and share documents, presentations, forms and spreadsheets.	Skill Enhancement
CO3	Organize online events and send invites	Skill Enhancement
CO4	Collaborate content within the components of google suite.	Skill Enhancement
equisites (if any)	**Computer Requirement:** One computer per student and Internet accessibility **REQUIRED SOFTWARE:** Google Applications	

Section-A

GOOGLE SUITE BASICS: GMAIL: Sign up for a Google account, Change Google account settings, Read and send e-mail messages, Send an email message with an attachment, Manage Gmail contacts, **GOOGLE DRIVE:** Introduction to Google drive, Uploading files, Managing files to google drive; **GOOGLE CALENDAR:** Create online calendar, Create an event, Create repeating events, Set up event reminders, Invite others to events, Share calendar with others, Change calendar views.

Section-B

GOOGLE CHROME: Navigate the Web with Google Chrome, Add and manage bookmarks and history, Use Google Chrome with Google Apps, **GOOGLE SEARCH:** Conduct a basic Google search, Analyze search results page, Filter search results using Google search tools.Refine search using Boolean operators.Search for reliable information on the Web.Evaluate search results by domain.**GOOGLE DOCS:** Create a word processing document (business letter, report, and table).Apply formatting features (fonts, paragraph styles, alignment, bullets/numbering, and line spacing).Insert aEnd move text and objects, e.g., images, links, footnotes, page numbers.Print a document.**GOOGLE SPREADSHEET:** Create a spreadsheet.Enter text, dates, and numbers into rows and columns.Merge cells vertically and horizontally.Enter and edit formulas in a cell and/or use the formula bar.Format cells.Sort and manage data.Use basic functions (AVERAGE, SUM, COUNT, MIN, and MAX).Print a spreadsheet.

Section-C

GOOGLE SLIDES: Create a presentation.Insert and delete slides.Insert text, images, drawings, videos, tables, and shapes.Format presentation settings.Download a presentation.Collaborate on documents.Share or email documents as attachments.**GOOGLE FORMS:** Create a form, share to get responses, download responses and evaluate them. **GOOGLE KEEP:** Create new notes, collaborate with other google suite elements.

Section-D

GOOGLE SITES: Create and manage a Google site.Insert images, links, gadgets, and Google-specific items.Embed items on Google site (e.g., maps, forms).Collaborate with others to manage sites.**GOOGLE MAPS:** Map a location, write reviews of a location on google maps. **HANGOUT:** start a group chat**, MEET:** make a conference video call**,** collaborate with google calendar, **GOOGLE PHOTOS:** Upload, download, delete.

Courses Code	Courses	Cours e	P O	P O	P O	P O	P O	P O	P O	P O	P O	P O	P O	P O		P S	P S

		Outcomes	1	2	3	4	5	6	7	8	9	10	11	12		O1	O2
CSW331B	SAP BA (Google suite)	**CO1**	0	0	0	0	3	0	0	0	0	0	0	0		2	2
		CO2	0	0	0	0	2	0	0	0	3	0	0	2		2	2
		CO3	0	0	0	0	2	0	1	0	0	0	0	2		2	2
		CO4	0	0	0	0	2	0	0	0	0	0	0	0		2	2

Course Title	**BEHAVIOURAL FINANCE/ MCH320B**
Course Type	Elective
Course Nature	Hard
L-T-P Structure	3-0-0
Credit	3
Course Objectives	To gain an understanding of financial market anomalies, biases and heuristic

	Course Outcomes (COs)	Mapping
CO1	To acquaint the students with the fundamental concepts of behavioural finance	Employability
CO2	To enable students to understand the concepts of market efficiency, market anomalies and role of behavioural finance	Skill Enhancement
CO3	To enable students to analyze and understand the concepts of heuristic & biases.	Employability

CO4	To formulate and review asset allocation based on investor's personality, behaviour and risk profile	Skill Enhancement

SECTION A

Introduction to Behavioural Finance, Effect of psychological level, Practical application of behavioral finance, Risk Tolerance Questionnaires and their limitations, Efficient Markets Hypothesis, Fundamental and Technical Analysis, Fundamental Anomalies, Technical Anomalies, Calendar Anomalies,

SECTION B

Asset Allocation and Risk Aversion, Value Investing and Growth Investing, Behavioural obstacles in pursuing value investing, Heuristics, Principle of asset allocation; Investor's Behaviour and Asset Allocation Process, Prospect Theory, Framing, and Mental Accounting; Noise Trading, & Limits to Arbitrage; Behavioral Explanations for Anomalies;.

SECTION C

Investors' Biases: An overview; Cognitive Biases; Emotional Biases; Implication of overconfidence bias, Representativeness Bias, Anchoring & Adjustment Bias, Cognitive Dissonance Bias, Endowment Bias, Self Control Bias, Loss Aversion Bias.

SECTION D

Rational Managers and Irrational Investors; Behavioral Investing and Neurofinance, Myers Briggs Type Indicator, Barnewall Two way model, Investors Personality Type Dimensions.

Texts & References

1. Behavioural Finance: Insights into irrational minds and markets

    - by Moniter, James (John Wiley & Sons)

2. Inefficient Markets: An Introduction to Behavioural Finance

   - by Andrei Shleifer, Andrei (Oxford University Press)

3. Behavioural Finance & Wealth Management: How to build optimal portfolio

   - by Pompian, Michael M (John Wiley & Sons)

4. Behavioural Finance

    - by Shefrin, Hersh (Edward Elgar Publication)

Journals / Magazines

1. The Journal of Behavioural Finance

   (Published by The Institute of Behavioural Finance and Lawrence Erlbaum

   Associates, Inc.)

2. International Journal of Behavioural Accounting & Finance

   (Published by Inderscience Publishers)

3. The Journal of Finance

4. The Journal of Financial Economics

5. American Economic Review

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH320B	BEHAVIOURAL FINANCE	CO1	2	2	X	X	X	X	X	3	2	2	3	2		1	1
		CO2	3	3	2	2	X	X	1	3	2	3	2	2		1	1
		CO3	2	1	3	2	X	X	X	3	2	3	2	2		1	1
		CO4	3	3	3	3	X	X	X	3	3	2	3	2		1	1

Course Title/Code	**Risk Management in Banking Sector/MCH335B**
Course Type:	**Core (Departmental)**
Course Nature:	**Hard**
L-T-P Structure	**3-0-0**
Credit	**3**

	Course Objectives	To enlighten the students with the concept of risk management in banks in general and techniques in measurement and control of credit risk, operational risk and market risk in particular.

	Course Outcomes (COs)	Mapping
CO1	To provide an insight on credit risk aspects relevant in banking sector norms and its relevance in present day banking function.	Employability
CO2	To enable students to understand the various dimensions of credit risk	Skill Enhancement
CO3	To bring in the importance of basel	Employability
CO4	To analyze the financial statements and company's background using parameters	Skill Enhancement

Section-A

Risk definition; Types of Risks- Credit risk, operational risk, and market risk; Asset Liability Management(ALM)-Concept, organization and techniques.

Section-B

Credit Risk Management: Introduction-Capital adequacy norms under Basel I & II, RBI guidelines on Risk management-Standardized and Advanced approaches for Credit Risk; Credit rating/credit scoring and rating system design, Credit Bureaus, Stress test and sensitivity analysis, Internal Capital Adequacy Assessment process.

Section-C

Operational Risk: Introduction, Likely forms of operational risk and causes for significant increase in operational risk, Basel Norms, RBI guidelines, Sound Principles of Operational Risk Management (SPOR)-SPOR identification, measurement, control of operational risk-Capital allocation for operational risk, methodology, qualifying criteria for banks for the adoption of the methods.

Section-D

Market risk: Introduction- Types of Market risks-Liquidity risk, interest rate risk, foreign exchange risk, price risk (equity), commodity risk-Prescriptions and treatment of market risk under Basel norms

Risk measurement & control in Banks-Calculation of risk, risk exposure analysis; Risk management- Capital adequacy norms, prudential norms, exposure norms, concept of Mid office.

References:

1. Uppal RK, Rimpi Kaur, Banking Sector Reforms in India, New Century Publications, New Delhi

2. Agarwal OP, Banking and Insurance, Himalaya Publishing House, Mumbai

3. Vijayaragavan Iyengar, Introduction to Banking, Excel Books, New Delhi

4. The Indian Institute of Bankers, Modern Banking, Mumbai

5. Indian Institute of Banking and Finance, Risk Management, Mumbai

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH335B	RISK MANAGEMENT IN BANKING SECTOR	CO1	2	2	X	X	X	X	X	3	2	2				1	1
		CO2	3	3	2	2	X	X	1	3	2	3	3	1		1	1
		CO3	2	1	3	2	X	X	X	3	2	3	X	1		1	1
		CO4	3	3	3	3	X	X	X	3	3	2	X	2		1	1

Course Title/Code	FINANCIAL MODELING/ MCH336B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0

Credits	3
Course Objectives	The primary focus of the course is to: · Relate the theory of finance to practical · Prepare usable spreadsheet models that will assist a financial manager with a firm's investment and financing decisions. · Introduced both simulation and optimization models.

	Course Outcomes (COs)	Mapping
CO1	TO develop a practical understanding of the financial theory underlying financial models.	Employability
CO2	TO classify different tools and techniques of financial modeling.	Skill Enhancement
CO3	TO identify uses of financial modeling.	Employability
CO4	TO explain the financial modeling process and will be able to develop a variety of financial models in Excel.	Skill Enhancement
equisites if any)		

Section – A

Introduction to Financial Modeling: Meaning and Types of Financial Models, Tools and Techniques of Financial Modeling, Uses of Financial Modeling, Process of Financial Model Development, Financial Modeling Skills.

Section – B

Creating Financial Model: Identify the problem, Gathering Data, Layout of Model, Defining inputs, calculations, and output blocks, determine audience, Basics of Excel, conditional formatting, Excel Formulas and macros.

Section – C

Valuation, Scenario Analysis & Sensitivity: Valuation Methods: DCF Analysis, Comparable Analysis ("Comps"), Precedent Transactions, Pivot Table, Pivot Chart, what if analysis, Applying Sensitivity Analysis, Applying Scenario Manager.

Section – D

Financial Modeling Techniques: Forecasting of financial statement, Time Value of Money, Capital Budgeting Model, Forecasting Methods- Moving Average, exponential smoothing, Trend Analysis.

Reference Book:

· Financial Modeling in Excel for Dummies by Danielle Stein Fairhurst, A Wiley Brand

· Tjia John, (2nd edition 2009), Building Financial Models, McGraw-Hill Professional.

· Soubeiga Eric (1st edition 2013), Mastrring Financial Modeling: A Professional's Guide to Building Financial Models in Excel, McGraw-Hill Professional.

· Bodhanwala, J., Rujbeh, (2nd edition 2010), Understanding and Analyzing Balance Sheet using Excel Worksheets, Prentice Hall International.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH336B	Financial Modeling	CO1	2	3	2	3	2	2	2	2	2	3	2	2		1	1
		CO2	2	2	2	3	2	2	2	2	2	2	2	1		1	1
		CO3	2	3	2	2	2	2	2	2	2	3	2	X		1	1
		CO4	2	2	2	3	2	2	2	2	2	1	X	X		1	1

Course Title/Code	**STRATEGIES AND PRACTICES OF FAMILY OWNED ENTERPRISES/MCH322B**
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credits	3
Course Objectives	By the end of the course, a student should be able to develop capability in their family owned enterprises.

Course Outcomes (COs)		Mapping
CO1	to understand the importance and steps involved in the parallel planning process that helps to transform the family enterprises.	**Entrepreneurship**

CO2	understand the essentials of family participation and develop effective ownership.	**Entrepreneurship**
CO3	To assess the firm's strategic potential and identify market strategies to finalize the strategy and investment decisions	**Entrepreneurship**
CO4	Understand how effective board are a critical link between the management and family	**Entrepreneurship**

SECTION A

The Importance of Planning for Business Families :the challenges facing family businesses, balancing family and business demands, the need and benefits of family business planning, the obstacles to family business planning Parallel planning process: meaning, goals/ decision areas of PPP, understanding strategic planning and family business, creating a shared future vision of the family and business.

SECTION B

Planning for the family- Family commitment- definition, importance, factors contributing towards family commitment - core family values, family business philosophy and family vision, Components of Family enterprise continuity planning- encouraging family participation, Preparing the next generation of family managers and leaders, the influence of life cycle on family business careers.

SECTION C

Planning for the Business- Assessing the firm's strategic potential, defining the firm's strategic potential, the swot analysis, the internal analysis, assessing the firm's financial strength, assessing the firm's marketing success, assessing the firm's organizational resources, the external analysis, analyzing the general environment, analyzing the market and industry, determining the firm's strategic potential , Exploring possible business strategies, discussing the firm's strategic priority, selecting the strategic direction, seven possible strategic directions and the basic business strategies, evaluating the basic business strategies, unique advantages of family businesses, potential disadvantages of family firms, recommending possible strategies

SECTION D

 The Final Strategy and Reinvestment Decision

identifying the business' strategy, assessing the family investment decision, analyzing the business' market value, family investment considerations, other factors affecting the reinvestment decision, reinvestment issues , the role of the board in family business planning affirming family and strategic commitment, supporting the family enterprise continuity plan, contributing to the business strategy plan

References:
1. Strategic Planning for the Family Business - Randel S. Carlock and John L. Ward
2. E.J. Poza, Smart Growth: Critical Choices for Business Continuity and Prosperity (San Francisco: Jossey-Bass, 1989);
3. J.L. Ward, Keeping the Family Business Healthy: How to Plan for Continuity, Growth, Profitability, and Family Leadership (San Francisco: Jossey-Bass, 1988).

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH322B	STRATEGIES AND PRACTICES OF FAMILY OWNED ENTERPRISES	CO1	3	3	2	1	2	2	2	2	2	2	3	2	1	1
		CO2	3	3	2	1	2	2	2	2	2	2	3	2	1	1
		CO3	3	3	2	2	2	2	2	2	2	2	3	2	1	1
		CO4	3	3	2	1	2	2	2	2	2	2	3	2	1	1

Course Title/Code	COPYRIGHT, PATENTS AND LAWS OF IP/MCH323B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credits	3
Course Objectives	To get the basic understanding of the emergence of Intellectual property Rights, its meaning, types, need and scope.

Course Outcomes (COs)		Mapping
CO1	To get the basic understanding of the emergence of Intellectual property Rights, its meaning, types, need and scope	Entrepreneurship
CO2	To study "Copyrights Laws" and related matters like DRM, CC and analyze the landmark cases.	Entrepreneurship
CO3	To study and analyze the Patent laws, its scope, rights and obligations, its procedure, infringement and defense mechanism	Entrepreneurship
CO4	To study laws related to trademark, industrial designs and Geographical indications and to examine its applications and practical implications	Entrepreneurship

SECTION A

General Aspects of Intellectual property Rights: Nature meaning and scope. Evolution and development of IPR's at International and National level, Emergence of WIPO and WTO-TRIPs,

Emerging issues in IPR

SECTION B

Introduction to Copyright and Their Applications

This covers the subject matter of copyright, how and when they are used, its impact, controversies in copyright – Digital Rights Management (DRM) and introduction to 'Creative Commons' (CC). Landmark cases relating to copyright will be discussed Meaning, Nature and Scope of Copyright, Infringement of Copyright and Enforcement of Copyrights

SECTION C

Introduction to Patents & Their Applications : This covers what is a patent, how it is identified, how to apply, what benefits the owner gets, what is patentable and where. These basics are re-iterated through landmark cases in the field of biotechnology, electronics, mechanical and chemical. Introduction to Patent Searching, Drafting & Procedures

This session will cover 'why IP' question, types of IP, what analytic opportunities does the rich IP database provide for – technology trend, technology strategy, business strategy can be derived from the various IPs generated and protected.

SECTION D

Introduction to Trademarks and Their Applications

Introduction to Design Rights and Their Applications –

This session covers designs – ornamental and others and how they can be protected. Cases are used to understand when a patent applies and when design rights apply.

Geographical Indication- Introduction to GI, Infringements and legal remedies

References:

1.Law related to Intellectual Property Rights –V.K.Ahuja

2.Law related to Intellectual Property Rights – Dr M.K. Bhandari

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH323B	COPYRIGHT, PATENTS AND LAWS OF IPR	CO1	1	2	X	X	3	3	X	X	X	X	2	1		2	2
		CO2	1	1	X	X	3	3	X	1	X	X	2	1		2	2
		CO3	1	1	X	X	3	3	X	1	X	1	2	1		2	2
		CO4	1	1	X	1	3	3	X	1	X	1	2	1		2	2

Course Title/Code	ENTREPRENEURIAL FINANCE/MCH324B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credits	3
Course Objectives	Cover the major financial, managerial and planning fundamentals of entrepreneurial finance. Provide in-depth discussion of venture capital, lease finance and SCBA..

Course Outcomes (COs)		Mapping
CO1	Describe the concepts of entrepreneurial finance and capital structure.	Skill Enhancement
CO2	Examine the sources of finance.	Entrepreneurship
CO3	Classify venture capital and lease finance.	Entrepreneurship
CO4	Demonstrate social cost benefit analysis and environmental appraisal.	Entrepreneurship

SECTION A

Financial Management of a New Venture,Nature and significance of Business Finance ; Financial management ; Entrepreneur and financial management functions ; Capital structure ; Venture capital financing ; Debt financing ; Working capital ; Types of resources to be mobilised.

SECTION B

Sources of Finance,Types of Business finance ; Sources of finance based on time period ; Equity Shares ; Preference shares ; Debentures / Bonds ; Retained profits ; Public deposits ; Term Loans ; Specialized financial institutions.

SECTION C

Venture Capital and Lease Finance, Venture capital as a source of finance ; Aims of venture capital ; Features of venture capital ;Criteria adopted by venture capitalists to provide venture capital finance ; Merits if venture capital ; Leasing as a source of finance.

SECTION D

Social Cost Benefit Analysis (SCBA)

Concept and Rationale of Social Cost Benefit Analysis

Concept of Shadow Pricing, Some cases of SCBA carried out on real Projects

SCBA by Financial Institutions

Environmental Appraisal of Projects

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH324B	ENTREPRENEURIAL FINANCE	CO1	2	2	1	2	1	2	1	1	1	2	2	1		1	1
		CO2	2	1	2	2	1	1	2	1	1	2	1	1		1	1
		CO3	2	2	2	1	1	1	1	2	2	2	2	1		1	1
		CO4	2	2	1	2	2	2	1	1	1	2	2	1		1	1

Course Title/Code	<mark>**PUBLIC HEALTH/ MCH327B**</mark>
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credits	3
Course Objectives	To provide an overview of major issues related to the design, function, management, regulation, and evaluation of health insurance programs and managed care organizations, including HMOs.

	Course Outcomes (COs)	Mapping
CO1	To introduce students to the field of public health and its various activities	Employability
CO2	To understand socio-economic and demographic characteristics of the community and the distribution and types of disease in the community	Skill Enhancement
CO3	To understand the Sources of Data & Data Evaluation	Employability

CO4	To gain knowledge about the Contemporary Issues in Public Health	Employability
equisites if any)		

SECTION A

Public Health in Context; Public Health Challenges

SECTION B

Working in organization – skills and approaches;Developing as a reflective practitioner;Ethical issues in Public Health;Educating for Health

SECTION C

Working at Local Level; Settings for promoting Health;Building Partnership and alliances

SECTION D

Building Healthy future – barriers and enablers; Evaluating Public health interventions

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH 327B	Public Health	CO1	3	3	2	1	1	2	1	2	2	2				1	1
		CO2	3	3	3	2	1	2	2	2	2	2				1	1
		CO3	2	3	3	2	1	2	2	2	2	2				1	1
		CO4	2	3	2	2	1	3	2	2	2	2				1	1

Course Title/Code	GLOBAL HEALTH SCENARIO/ MCH329B

Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P Structure	3-0-0
Credits	3
Course Objectives	To develop an understanding of basic concepts and determinants of Global Health

	Course Outcomes (COs)	Mapping
CO1	Develop an understanding of basic concepts and determinants of Global Health	Skill Enhancement
CO2	To gain insight on strategies and programs of promoting human health & global health governance	Employability
CO3	Identify the major issues of global health	Employability
CO4	Discuss the role of sustainability on global economic health & development	Employability

SECTION A

Introduction to Global Public Health: Concepts, Overview Data Used To Monitor Global Health (Morbidity/Mortality) ; Measures of Health and Disease in Populations

SECTION B

Culture, Behavior and Health ; Infectious Diseases; Social Determinants of Health

SECTION C

Unit III: Design of Health Systems ; Management and Planning for Global Health; Globalization and Health

SECTION D

Global Mental Health ; Unintentional Injuries and Violence; Health and the Economy Substance Abuse; Complex Emergencies; Nutrition; Reproductive Health; Cooperation in Global health; Evaluation of Large Scale Health Program Malaria, Dengue

References :

1.Michael Merson, Robert Black, Anne Mills. Global Health: Diseases, Programs, Systems and Policies. Copyright 2012. (Jones & Bartlett)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH 329B	GLOBAL HEALTHCARE SCENARIO, (HCM)	CO1	3	2	1	1	2	2	2	2	2	1			1	1
		CO2	3	2	X	X	2	2	2	2	2	1			1	1
		CO3	3	2	X	1	2	3	X	2	2	1			1	1
		CO4	3	2	1	1	2	2	2	2	2	1			1	1

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

Course Outcomes (COs)		Mapping
CO1	To acquaint students with shipping industry	Employability
CO2	To acquaint students with types of ships and trading	Skill Enhancement
CO3	To acquaint students with types of rules related to shipping , laws ,and shipping indices	Employability
CO4	To acquaint students with Environmental issues connected with Ports	Skill Enhancement
equisites if any)		

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

Environmental issues connected with Ports & Terminals – Health & safety issues – Port Security issues – International Ships & Port facility security (ISPS) code.Role of Agents.

Ship Agents and E-commerce – Information flow through Ship Agents – Electronic Data Interchange – Use of Internet, Access to Principals Systems for conducting Day to Day Work – Use of electronic systems namely Bolero, Liner Portals. International Freight Forwarding – Logistics Service Providers – Project Cargo Forwarding – Multimodal operations – Warehousing Operations

References:
1. Carting practice (Analysis of C/Ps) – J. Bes, 1st Ed.1960 (Barker)
2. Ocean Freight & Chartering – C.F.H. Cufley, 1st Ed. 1970(Crossby
3. Chartering Documents – H.Williams, 3rd Ed. 1996(LLP).
4. Shipping & Chartering Practice – Gorton , 1hre, etc. 4th Ed.1995 (LLPBes'Chartering & Shipping Terms – N.J Lopez, 11th Ed. 1992 (Barker).
5. Ship Management (Business of Shipping) – Malcolm Willingale (4th Edn, LLP Professional Publications 2005)

6. Professional Ship Management – Panayides P (Ashgate Publications 2001)

7. Guidelines on ISM Code – International Shipping Federation (ISF 3rd Edition, New Guidelines 2010)

8. Commercial Management in Shipping – R.Tallack (Nautical Institute)

9. Port State Control – Dr.Z.Ozcayir (2nd Edn,Informa Professional June 2004)

10. Start Your Own Freight Brokerage Business - Lynn & Jacquelyn (3rd Edn, Entrepreneur Press)

11. Freight Forwarding & Multimodal Transport Contract – D. Glass (1st Edn, Informa Legal Publishing UK 2004)

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH331B	INTRODUCTION TO SHIPPING	CO1	1	2	2	X	3	2	X	1	X	2	1	1		1	1
		CO2	2	1	2	2	2	2	X	3	2	X	2	2		1	1
		CO3	X	2	2	2	x	1	2	X	2	X	2	2		1	1
		CO4	2	X	2	3	2	3	2	2	3	3	2	2		1	1

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

Course Outcomes (COs)		Mapping
CO1	To acquaint students with the types of multimodal transportation	Employability
CO2	To acquaint students with the strategies of implementing multimodal transportation	Employability

CO3	To acquaint students with the planning the multimodal transportation models	**Employability**
CO4	To acquaint students with the intelligent transportation systems	**Employability**

SECTION A

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

SECTION B

Case Studies on TDM strategies, Introduction to Public Transport System(PTS).

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

SECTION C

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

SECTION D

Introduction to Intelligent Transportation Systems, Introduction to ITS,

Telecommunications in ITS . Components of ITS Architecture, ITS Architecture,

 ITS functional areas, ITS Operations, ITS Applications .Case studies.

Smart cities and their transport systems. Transport and mobility technologies

References :
1. A Textbook on Container & Multimodal Transport Management: by Hariharan
2. Management & Operation Of Container Terminals & Multi-Modal Transport Logistics by Capt. Ramesh G. Khare
3. Logistics and Multi-Modal Transport by by Tony Mason

4. Logistics and Multi-Modal Transport by by Institute of Chartered Shipbrokers

5. Multimodal Transport Systems by by Slim Hammadi and Mekki Ksouri

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH332B	MULTIMODAL TRANSPORTATION	CO1	1	2	2	X	3	2	X	1	X	2	1	1	1	1
		CO2	2	X	2	2	2	3	X	3	2	X	2	2	1	1
		CO3	X	2	2	2	x	1	2	X	2	X	2	2	1	1
		CO4	2	X	X	3	2	3	2	2	3	3	2	2	1	1

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

	Course Outcomes (COs)	Mapping
CO1	To acquaint students with role of distribution in supply chain	Skill Enhancement
CO2	To acquaint students with Distribution network planning	Employability
CO3	To acquaint students with Transportation management strategy	Skill Enhancement
CO4	To acquaint students with Intelligent transport management systems	Employability

Prerequisites (if any)	

SECTION A

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

SECTION B

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

SECTION C

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

SECTION D

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

References:

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

2. Sunil chopra and P Meindl , supply chain management strategy .

3. Transportation Management – Imperatives and Best Practices, S. Jaya Krishna, ICFAI University Press, 2007.

4. Marine Transportation Management, Henry S. Marcus, Auburn House Pub. Co.,1986.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MCH333B	TRANSPORTATION AND DISTRIBUTION MANAGEMENT	CO1	1	2	3	X	3	2	X	1	X	2	1	1	1	1
		CO2	2	1	2	2	2	2	X	3	2	X	2	2	1	1
		CO3	X	2	2	2	x	2	2	X	2	X	1	2	1	1
		CO4	1	X	2	3	2	3	2	2	3	3	2	2	1	1

Course Title/Code	**Machine Learning & AI / MCH342B**	
Course Type	Core	
L-T-P Structure	2-0-2	
Credits	3	
Course Objective	Understand the supervised and unsupervised learning methods and MLAI Techniques and its applicability in the industry	
Course Outcomes (COs)		**Mapping**
CO1	Demonstrate the understanding of Supervised Learning Methods particularly Decision Trees	Employability
CO2	Demonstrate the Understanding of Unsupervised Learning methods	Employability
CO3	Apply Support Vector Machines for supervised Learning	Employability
CO4	Demonstrate the Understanding of Market Basket Analysis	Employability
CO5	**Understand Artificial Intelligence and Neural Networks**	**Emplyability**

Section I

Classification and Regression Tree

Classification & Regression, working of a Decision Tree, Attribute Selection Measures, Information Gain, Gain Ratio, Gini Index, Building Decision Trees, CART, C5.0, and CHAID Trees, Prediction by Decision Tree, Advantages and Disadvantages of Decision Trees, Model Overfitting, Building Decision Trees in R.

Section II

Clustering

Cluster Analysis versus Factor Analysis, Overview of Basic Clustering Methods, Agglomerative Hierarchical Clustering, Within-Group Linkage, Nearest Neighbour or Single Linkage, Furthest Neighbour or Complete Linkage, Centroid Clustering, Ward's Method, K-Means Algorithm, Dendrogram, Profiling of Cluster, Cluster Evaluation.

Section III

Support Vector Machine

Decision Boundaries for Support Vector Machine, Maximum Margin Hyperplanes, Structural Risk Minimization, Linear SVM-Separable Case, Linear SVM-Non-Separable Case, Kernel Function, Kernel Trick, Kernel Hilbert Space, Model Evaluation.

Section IV

Market Basket Analysis- Market Basket Analysis and Association Analysis, Market Basket Data, Stores, Customers, Orders, Items, Order Characteristics, Product Popularity, Tracking Marketing Interventions, Association Rules, Support, Confidence, Lift, Chi-Square Value, Sequential Pattern Analysis

Introduction to Artificial Intelligence-Current Trends in AI, Intelligent Agents, Environments, Problem Solving Agents, Searching Techniques, Knowledge and Reasoning in AI, Forms of Learning, Structure of a Neural Network, Analogy with Biological Neural Network, Activation Functions, Gradient Descent, Model Accuracy.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH342B	Machine Learning and AI	CO1	3	2	3	3	2	X	2	2	2	2	X	1		2	2
		CO2	3	3	2	2	2	X	3	2	2	2	X	2		2	2
		CO3	3	3	3	3	2	X	2	2	2	2	X	1		2	2
		CO4	3	2	3	3	3	X	3	3	3	3	X	1		2	2

Course Title/Code	**Supply Chain Analytics/ MCH343B**	
Course Type	Core	
L-T-P Structure	2-0-2	
Credits	3	
Course Objective		
Course Outcomes (COs)		**Mapping**
CO1	**To give them conceptual understanding and importance of Supply Chain Management.**	Employability
CO2	**To Demonstrate and Elaborate various strategies of Network Planning and ATP Production Planning & Scheduling**	Employability
CO3	**To elaborate on the Processes of Supply chain Implementation systems along with Architecture of APS.**	Employability
CO4	**To Demonstrate the Understanding of SCM Models in various Industries.**	Employability

Section A

Basics of Supply Chain Management Supply Chain Management – An Overview,Supply Chain Analysis Types of Supply Chains Advanced Planning.

Section B

Concepts of Advanced Planning Systems Structure of Advanced Planning Systems.

Strategic Network Planning Demand Planning Master Planning,Demand Fulfillment and ATP Production Planning and Scheduling.

Section C

Purchasing and Material Requirements Planning Distribution and Transport Planning Coordination and Integration Collaborative Planning. . Implementing Advanced Planning Systems The Definition of a Supply Chain Project The Implementation Process. Architecture of Selected APS.

Demand Planning of Styrene Plastics Scheduling of Synthetic Granulate.

Section D

SCM in a Pharmaceutical Company Food and Beverages ,Computer Assembly ,Semiconductor, Manufacturing.

Courses Code	Courses	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1	PSO2
MCH343B	Supply Chain Analytics	CO1	2	2	3	3	2	X	2	2	2	2	X	2		2	2
		CO2	2	2	3	2	2	X	3	2	2	2	X	2		2	2
		CO3	3	2	2	3	1	X	2	2	2	2	X	1		2	2
		CO4	3	3	2	3	2	X	3	3	2	3	X	2		2	2

MANAV RACHNA UNIVERSITY
SCHOOL OF MANAGEMENT AND COMMERCE
SYLLABUS- MBA- BUSINESS ANALYTICS (BA)
2022-2024

SCHOOL OF MANAGEMENT AND COMMERCE
SYLLABUS- MBA- BUSINESS ANALYTICS (BA)
2022-2025

SEMESTER – 1										
SUBJECT CODES	**SUBJECT NAME**	***OFFERING DEPARTMENT**	***COURSE NATURE (Hard/Soft/ Workshop/ NTCC)**	**COURSE TYPE (Core/Elective / University Compulsory)**	**L**	**T**	**P**	**O**	**NO. OF CONTACT HOURS PER WEEK**	**NO. OF CREDITS**
MCH501B	Management Processes & Organizational Behavior	SMC	Hard	Core	3	0	0	0	3	3
MCH502B	Marketing Management	SMC	Hard	Core	3	0	0	0	3	3
MCH503B	Financial Management	SMC	Hard	Core	3	0	0	0	3	3
MCH 504B	Research Methodology	SMC	Hard	Core	3	0	0	0	3	3
MCH505B	Introduction to Business Analytics	SMC	Hard	Elective	3	0	0	0	3	3
MCH506B	Database Management Systems& SQL	IOA	Hard	Core	2	0	2	0	3	3
MCH507B	Python Programming	IOA	Soft	Elective	0	0	4	0	4	2
CDO501	Skill Enhancement-I	CDC	Soft	University Compulsory	0	0	4	0	4	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					**17**	**0**	**10**	**0**	**26**	**22**

Course Title/Code	**Management Processes & Organizational Behavior/** MCH501B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	Upon successful completion of this course the student should be able to explain the crucial part played by individuals and groups in organization processes, such as decision making,planning and managing new technology; analyze leadership styles and determine their effectiveness in employee situations; analyze team dynamics and cultural diversity.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25 %
	D	25 %
	TOT AL	10 0%

SECTION -A

Introduction to Management: Meaning and Nature of Management, Evolution of Management, Tasks and Responsibilities of a Professional Manager, Management by Objective

SECTION -B

Process of Management: Planning- Concept, Process and Techniques, Directing — Definition, Principles and Process, Controlling - Definition, Process and Techniques, Decision Making — Concept, Importance and Models.

SECTION -C

Fundamentals of Organizational Behaviour: Organizational Behaviour - Nature and Scope, OB Models — merits and demerits, Personality — concept and types, Perception and Attitude, Learning — concept and theories, Motivation — definition, importance and theories, Managing stress at Work — concept and techniques, Organization Structure — concept and types, Organizational Processes and Structure: Organizational Design and Structure, Organizational Culture and Climate, Cross Cultural Organizational Behavior

SECTION -D

Group and their Dynamics, Work Teams: Group and their dynamics — Concept and Types, Work Teams — definition and importance, Stages of team Building and its behavioral dynamics, Leadership - Concept, Importance and Styles, Organizational Justice - Concept, Importance and types

References

1. Robbins, S.P. Judge, T.A., Vohra, N. (2016), Organizational Behaviour, 16/e, Pearson Education
2. Nahavandi, A., Denhardt R. B., Denhardt, J. V., Aristigueta M. P. (2015),Organizational Behavior, Sage Publications
3. Greenberg,J. and Baron, R.A. (2015), Behavior in Organization, Pearson Education..
4. Newstrom,J.W.& Davis, K (2014), Organizational Behavior at Work, TataMcGrawHill.
5. George, J. M. & Jones, G.R. (2012), Understanding and Managing OrganizationalBehaviour 6/e, Pearson Education.
6. Nelson D.L., Quick, J.C. & Khandelwal, P. (2014), ORGB, 2/e, Cengage Learning.

Course Title/Code	**Marketing Management/** MCH502B
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The basic objective of this course is to develop an understanding of the underlying concepts,strategies and the issues involved in managing the marketing efforts of a firm.

	Sections	**Weightage**
	A	25%
	B	25%
Syllabus	C	25%
	D	25%

	TOT AL	100%

SECTION A

Introduction & Marketing Environment: - Introduction to marketing function; genesis, approaches to marketing, concept of customer value, customer satisfaction and delight. Marketing mix concept, classification of goods and services; goods-service continuum. Emerging fields of marketing- green marketing, digital marketing, viral marketing, neuro marketing.Analyzing needs and trends Macro Environment -Political, Economic, Socio-cultural, Legal, Ecological and Technical Environment – PEST analysis. Micro Environment – Industry & Competition.

SECTION B

Market Segmentation, Targeting and Positioning Product and Pricing Decisions: -Definition, Need & Benefits. Bases for market segmentation of consumer goods, industrial goods and services. Segment, Niche & Local Marketing, Effective segmentation criteria, Evaluating & Selecting Target Markets, Concept of Target Market and Concept of positioning – Value Proposition & USP. Types of new product, new product development, managing Product Life Cycle, test marketing of a new product. Branding decisions; packaging and labeling; new trends in packaging. Pricing objectives, Factors influencing pricing decision - approaches to pricing – Price & Non-price competition, setting the price and managing the price changes.

SECTION C

Distribution and Promotion Decisions: -Importance, Functions of distribution channels - introduction to the various channels of distribution, designing marketing channels. Direct Marketing, Impact of technology & Internet on distribution. Promotional Mix - Advertising, Sales Promotion, Personal Selling,Public Relations. Impact of technology & Internet on Promotion

SECTION D

Marketing Organization and Control: Concept, Types - Functional organization, Product Focused organization, Geographic Organization, Customer Based Organization, Matrix organization. Organization structure for a wide customer orientation. Need of marketing control and audit.

References:

1. Kotler Philip, Keller Kevin Lane, KoshyAbraham andJhaMithileshwar – Marketing Management: A South Asian Perspective (Pearson Education 14th Edition).

2. Lamb CW, Hair JF, Sharma, D and McDanial, C- MKTG-A South AsianPerspective, Cengage Publication.

3. Stanton William J - Fundamentals of Marketing (McGraw Hill)

4. Ramaswamy V.S. and Namakumari S - Marketing Management: Planning,Implementation and Control (Macmillian, 3rd Edition).

5. Etzel, M., Walker, B., Stanton, W. and Pandit, A (2009) Marketing Management,Tata McGrawHill, New Delhi

6. Mc. Carthy and Perreault -Basic Marketing: A Global Marketing Approach (TataMcGraw Hill, 15th Edition).

7. Saxena, Rajan (2009), Marketing Management, Fourth Edition, Tata McGraw HillEducation Pvt. Ltd.New Delhi.

Course Title/Code	**FINANCIAL MANAGEMENT/** MCH503B
Course Type:	Core (SMC)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	Theobjectiveofthecourseistohelpindevelopingskillsinarrangingfinance,makinginvestmentdecisionsandmanagingworkingcapital,besidesexaminingthecontemporaryissuesinthecontextof managing corporatefinance.

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

SECTION A
OverviewofFinanceFunctions: Nature and Scope of Financial Management; Financial Objectives;Environment ofFinancialManagement; Value of Money– Annuity and present value of different types of cash flows,concept of Risk and Return,Valuation of Bonds and shares

SECTION B
InvestmentDecision: Conventional and DCF Methods; Inflation and Capital Budgeting; Risk Analysis in Investment decisions-Certainty Equivalent Factor;Risk Adjusted Discounting Rate;Decision Tree;Independent and Dependent Risk Analysis.

SECTION C

Financing Decision & Working Capital Decision: Capital Structure;Leverages; NetIncomeApproach;Net Operating Income Approach;Traditional Approach and MM Approach; Sources of Funds, Cost of Capital, Design of Capital Structure,Concept of Working Capital-Fixed and Fluctuating,Gross vs.Net,Factors affecting Working Capital Management;Working Capital gap,Management of Cash,Inventories,Receivables and Trade Liabilities.

SECTION D

DividendDecision & ContemporaryFinancialIssues: Retained Earnings Vs. Dividend Decision; Gordon Model; WalterModel; MM Approach; Lintner Model; Dividend Policy Decision, Leasing, Corporate Restructuring, LBO, Mergers and Acquisition.

ReferenceBooks:

- Brealey,R.R.,Myers.S.,Allen,F.,& Mohanty,P.(2009).Principles of corporate finance, NewDelhi: TataMc-GrawHill ,EighthEdition.
- Damodaran,A.(2001),CorporateFinanceTheoryandPractice,Wiley Publication,SecondEdition.
- Pandey,I.M.(2010),FinancialManagement,VikasPublishingHouse,TenthEdition.
- Higgins,R.C.(2011),AnalysisforFinancialManagement,McGrawHill/IrwinSeries,TenthEdition.

Course Title/Code	**Research Methodology**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	This course aims to develop students' abilities to design and implement methodologically sound and practically relevant empirical business research. It is designed to give students a solid foundation for working on individual and group research projects and the ability to be informed users of research results presented and/or published by others.

Syllabus	Sections	Weightage
	A	25%
	B	25%
	C	25%

D   25%

TOTAL 100%

SECTION A

- Introduction
- Definition of Research
- Characteristics of Research
- Objectives of Research
- Nature of Research
- Importance of Research Relevance of Research Restrictions in Research Process
- Difference between Research Method and Research Process

SECTION B

- Research Design: Concept of Research Design
  Types of Research Design
  Including Exploratory
  Descriptive and Experimental
  Research Design Process.
- Concept of Questionnaire and Schedule
  Principles of Designing Questionnaire and Schedule
  Limitations of Questionnaire
  Reliability Validity of Questionnaire.

SECTION C

- Sampling Theory
  Concept
  Need and Importance of Sampling
  Types of Sampling Methods
  Sampling and Non-Sampling Errors
  Sample Design
  Determinants of Sample Size
  Steps in Designing the Sample

SECTION D

- Data Analysis

Tabulation and Processing of Data
Basic Aspects of Statistical Inference Theory and Hypothesis Testing
Type I and Type II Errors
Applications of T-Test
Z-Test
F-Test
Chi-square Test and ANOVA

Course Title/Code	**Introduction to Business Analytics/** MCH505B
Course Type:	Elective (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	In order to gain profitable growth in a competitive business environment, solving complex problems by choosing from a multitude of options is extremely difficult. The objective of the course is to provide know-how to evaluate various alternatives by gaining insight from past performance in the essence of business analytics. Business analytics focuses on how business performance can be improved by changing the course of actions and using various tools to perform informed decision making.

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

SECTION A

Introduction and Data Visualization: Introduction: Decision making, Business analytics defined, big data, and Business analytics in practice. Descriptive Statistics: Overview of using data: definitions and goals, types of data, modifying data in excel, creating distributions from data, measures of location and variability, analyzing distribution, measures of association between two variables. Data Visualization: Overview, Tables, Charts, Advanced data visualization, data dashboards.

SECTION B

Spreadsheet Models and Linear Optimization Models, Integer Linear Optimization Models and Nonlinear optimization Models: Spreadsheet Models: Building good spreadsheet models, what if analysis, excel functions for modeling, auditing spreadsheet models. Linear optimization models: Minimization problem, solving the par. Inc. problem, maximization problem, special cases of linear program outcomes, sensitivity analysis, general linear programming notation. Types of Integer linear optimization models, east borne reality example, solving using excel solver, application involving binary variables, modeling flexibility provided by binary variables, generating alternatives. Nonlinear optimization models: a production application, local and global optima, a location problem, Markowitz portfolio model, forecasting adoption of a new product.

SECTION C

Monte Carlo Simulation and Decision Analysis Business Analytics Applications: Monte Carlo Simulation: Risk Analysis for Santonics LLC, Simulation modeling for land Shark Inc., Simulation considerations. Decision analysis: Problem Formulation, Why resource constraints are important to support business analytics: introduction, business analytics personnel and business analytics data, Descriptive: Visualizing and exploring data, sampling and estimation, Predictive: Logic Driven Models, data driven models, data mining. Prescriptive Analysis: Prescriptive modeling: non-linear optimization.

SECTION D

Measures & metrics and Performance Management: Need for measurement, characteristics of measures, measurement system terminology, Salient attributes of a good metric, SMART test for ensuring metric relevance to business,Supply chain associated with the metric, Fact-based decision making and KPIs, Few sample KPIs used by Human Resource (HR) division, Mapping metrics to business phases KPIs, and Performance Management

References:

1. Liebowitz, J. (2013), Business Analytics: An Introduction, AuerbachPublications.
2. Hardoon, D.R., and Shmueli, G. (2016), Getting Started with Business Analytics, CRC Press, Taylor & Francis.
3. Rao, P.H.(2014),Business Analytics:An Application Focus,Prentice HallIndia.
4. Sharma, J.K., Khatua, P.K. (2012), Business Statistics,Pearson.

Course Title/Code	**Database Management System & SQL**/ MCH506B
Course Type:	Core (IOA)
Course Nature:	Hard
L-T-P-O Structure	2-0-2-0
Course Objectives	This module will help students gain much needed knowledge pertaining to Relational Database Management Systems, Data Models, SQL query processing, Normalization along with File Organization, Indexing and Hashing.

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

SECTION A

Introduction to Database Management Systems: Introduction-Database System Applications, Purpose of Database Systems, Views of Data, Data Abstraction, Instances and Schemas, Data Models, Database Languages, DDL, DML, Database Architecture, Database Users and Administrators, Database Design, ER Diagrams, Entities, Attributes and Entity Sets, Relationships and Relationship sets, Integrity Constraints, Views.

SECTION B

SQL Operators and Relational Theorems and Normalization : Relational Algebra and Calculus, Selection and Projection, Set Operations, Renaming, Joins, Division, Relational calculus, Tuple Relational Calculus, Domain Relational Calculus, Forms of Basic SQL Query, Nested Queries, Comparison Operators, Aggregate Operators, NULL values, Logical connectives, AND, OR and NOT, Outer Joins, Triggers, Problems Caused by Redundancy, Decompositions, Functional Dependencies, Normal Forms, First, Second, Third Normal forms, BCNF, Properties of Decompositions, Lossless Join Decomposition, Dependency Preserving Decomposition, Multi Valued Dependencies, Fourth Normal Form, Join Dependencies, Fifth Normal Form.

SECTION C

Transactions: Transaction Management, Transaction Concept, Transaction State, Implementation of Atomicity and Durability, Concurrent, Executions, Serializability, Recoverability, Implementation of Isolation, testing for serializability, Concurrency Control, Lock, Timestamp Based Protocols, Validation Based Protocols, Recovery, Failure Classification, Storage Structure, Atomicity, Log Based Recovery, Remote Backup Systems.

SECTION D

File Organization: File Organization Basics, Sequential File Organization, Heap File Organization, Hash File Organization, B+ File Organization, DBMS Cluster Files, Indexing in DBMS, B+ Trees, Hashing, Static Hashing and Dynamic Hashing, RAID.

References
1. Abraham Silberschatz, 2021, *Database System Concepts,* McGraw.
2. Guy Harrison, 2015, *Next Generation Databases: No SQL and Big Data*, Apress.
3. RamezElmasri, Shamkant B. Navathe, 2013, *Database Systems*, Pearson.
4. A. Silberschatz, H. F. Korth, S. Sudarshan, 2006, *Database System Concepts*, McGraw Hill.

Course Title/Code	**Python Programming/** MCH507B
Course Type:	Elective (IOA)
Course Nature:	Hard
L-T-P-O Structure	0-0-4-0
Course Objectives	This course will provide students and exposure towards Python Programming. The students will gain programming knowledge based on important Python libraries such as Numpy, Pandas and Matplotlib.

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

SECTION A

Introduction to Numpy: Fixed-Type Arrays, Creating Arrays from Python Lists, Creating Arrays from Scratch, Numpy Array Basics, Numpy Array Attributes, Array Indexing, Array Slicing, Reshaping Arrays, Array Concatenation and Splitting, Computation on Numpy Arrays, Aggregations, Fancy Indexing, Sorting Arrays, Numpy Structured Array.

SECTION B

Data Manipulation with Pandas – I : Pandas Objects, Pandas Series Objects, Pandas Dataframe Objects, Pandas Index Object, Data Indexing and Selection, Operating on Data in Pandas, Handling Missing Data, Operating on Null Values, Hierarchical Indexing, Indexing and Slicing a Multi-Index, Rearranging Multi-Indices, Data Aggregations and Multi-Indexes.

SECTION C

Data Manipulation with Pandas – II: Combining Datasets – Merge and Join, Categories of Joins, Specification of the Merge Key, Specifying Set Arithmetic for Joins, Overlapping Column Names, Aggregation and Grouping, Pivot Tables, Vectorized String Operations, High Performance Pandas functions.

SECTION D

Matplotlib – I& Matplotlib – II: General Matplotlib Tips, Setting Styles, Simple Line Plot and Adjustments, Simple Scatterplots, Visualizing Errors, Basic Error Bars, Continuous Errors, Density and Contour Plots, Visualizing A 3-D Function, Histograms, Binning And Density, Customizing Plot Legends, Colour Bars, Multiple Legends, Subplots, Text And Annotations, Customizing Matplotlib, Configurations and Stylesheets, 3-D Plotting in Matplotlib, 3-D Points and Lines, 3-D Contour Plots, Wireframes and Surface Plots, Surface Triangulations, Geographic Data with Basemap, Map Projections, Plotting Data on Maps, Seaborn Comparison with Matplotlib.

References

1. R.Nageswara Rao. (2018). *Core Python Programming*. Dreamtech.
2. John Hearty. (2016). *Advanced Machine Learning with Python*. Packt.
3. Jake VanderPlas. (2016). *Python Data Science Handbook: Essential Tools for Working with Data*. O'Reilly.

Course Title/Code	**Skill Enhancement**
Course Type:	University Mandatory (CDC)
Course Nature:	Soft

L-T-P-O Structure	0-0-4-0
Course Objectives	.

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

Course Outcomes: - By the end of this course the:

CO 1: Students will be able to recognize problems based on arithmetic & number systems.

CO 2: Students will be able to solve problems based on verbal reasoning & simplification.

CO 3: Students will be able to calculate the correct answers to the problems within given time.

CO 4: Students will be able to develop a holistic approach by mastering essential corporate nuances.

CO 5: Students will be able to deliver impactful presentations

CO 6: Students will be able to prepare effectively for their interviews

Section A

Numbers, Percentage, Profit Loss, Simple Interest & Compound Interest

Section B

Direction Sense, Coding Decoding, Blood Relation, Number & Letter Series

Section C

Attitude, Mindset and its impact, Building the Brand me, Etiquette, Respect, Accountability & Integrity, Diversity & Inclusion, Email, cover letter, Power of words and Tone, Pronunciations and rate of Speech

Section D

Presentation Skills in detail, Resume writing, Interview Essentials, Power Dressing, Group Discussion.

			SEMESTER - 2							
SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/ Elective / University Compulsory)	I	T	P	O	NO. OF CON-TACT HOURS PER WEEK	NO. OF CREDITS
	Corporate Finance	DMC	Hard	CORE	3	0	0	0	3	3
	Strategic Management									
	Operations Research	DMC	Hard	CORE	3	0	0	0	3	3
	Data Visualization Tableau	CSE	Soft	ELECTIVE	0	0	4	0	4	2
	Data Cleaning using R	IOA	Elective	ELECTIVE	0	0	4	0	4	2
	Multivariate Data Analysis	IOA	Elective	ELECTIVE	2	0	2	0	4	3
	Creativity Innovation & Design Thinking	DMC	Hard	CORE	3	0	0	0	3	3
	Skill Enhancement-II	CDC	Soft	University Compulsory	0	0	4	0	4	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					11	0	14	0	25	18

Course Title/Code	**CORPORATE FINANCE**
Course Type:	Core (SMC)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	

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

SECTION A

Corporate Finance – Introduction, Financial analysis, Fundamental analysis in Cash Flow Analysis, Financial Analysis and Forecasting, Types of Financial analysis, how to perform a financial analysis, Margin Analysis- Risks and Structure.

SECTION B

Investors and Markets –Investment Decision Rules-The financial markets, The Time Value of Money and Net Present Value and The Internal rate of Return (IRR); The Risk of Securities and the required rate of return; Financial Securities,

SECTION C

Value and Corporate Finance – Valuation Techniques, Measuring Value Creation, Investment Criteria, Investment Criteria, Risk and Investment analysis, Valuation Techniques.

Corporate Governance and Financial Engineering –Financing Start-ups, Initial Public Offerings(IPO), Leveraged Buyouts (LBOs), Bankruptcy and Restructuring, Managing Financial Risks, Managing Cash Flows and Managing Working Capital.

Course Title/Code	**Operation Research**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The course aims at equipping students with the understanding of the research process,tools and techniques in order to facilitate managerial decision making.

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

Unit-I

Operations Research: Evolution, methodology and role in managerial decision making. Linear programming: Terminology; Properties and assumptions; Formulation of LP problems; Graphical method; Simplex method (Upto three variables), special cases in LPP, concept of duality.

Unit-II

Transportation problems: Concept, Methods of Initial Solution (NW Corner, Least Cost, and VAM) Optimal solution by MODI method, Stepping Stone method. Special cases in transportation problems: unbalanced problems, degeneracy, maximization objective and multiple optimal solutions.

Assignment problems: Concept, Hungarian method, Special cases in assignment problems: unbalanced problems, maximization objective and multiple optimal solutions.

Unit-III

Queuing theory: concept, assumptions and applications; Poisson distributed arrivals- Exponentially distributed service time models (MM1 and MMK).

Unit-IV

Game theory: Pure and mixed strategy games, principle of dominance, 2-person zero sum game and their solution. Replacement Theory: Individual and Group replacement.

References:
Paneerselvam, Operations Research, Prentice Hall of India, N. Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, N. Delhi.
3. Vohra, N.D.; Quantitative Techniques in Management; Tata McGraw Hill Publishing Company Ltd., New Delhi.

4. Kapoor, V.K., Operations Research; Sultan Chand & Sons, New Delhi.
5. Sharma, J.K., Operations Research: Theory and Applications, Macmillan India Ltd, New Delhi.
6. S. Kalavathy, Operations Research, Vikas Publishing House, New Delhi.

Course Title/Code	Data Visualization Tableau
Course Type:	Core (SMC)/CSE
Course Nature:	Hard
L-T-P-O Structure	0-0-4-0
Course Objectives	This course will introduce the main concepts of visual analytics with a hands-on tutorial using Tableau, a leading self-service data visualization tool.

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

SECTION A

Intro to Data Visualization: Intro to data visualization (lecture) • Getting started with Tableau Desktop • Connecting to the tutorial dataset • Creating the first charts

SECTION B

Common charts: • Creating common visualizations (bar charts, line charts etc.) • Filtering and sorting data • Adding Titles, Labels, and descriptions • Publish your work to Tableau Cloud
Home Assignment: Create a standalone data visualization

SECTION C

Transform the data: • Creating simple calculations in Tableau • Using table calculations • Intro to Tableau Prep
Home Assignment: Create a dashboard in Tableau

SECTION D

Data Storytelling : Intro to data storytelling • Creating a data story in Tableau • Overview of the Tableau and Dataviz ecosystem • Further learning opportunities Personal project assignments and discussion.

ReferenceBooks:
- Textbook: There is no required textbook for this course. All required readings and/or videos will be provided in the lab
- Tools to Learn: Tableau offers a free one-year Tableau license to students. Please download it here: https://www.tableau.com/academic/students

Course Title/Code	DATA CLEANING USING R
Course Type:	IOA
Course Nature:	Elective
L-T-P-O Structure	0-0-4-0
Course Objectives	This course will provide students and exposure towards Data Cleaning. The course comprises an introduction to Data Cleaning, Pre-processing Character Strings, Factor Types and Dates, and Data Manipulations based on tidy package under R.

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

SECTION A

Introduction & Working with Character Strings: Data Cleaning and Wrangling Overview, R Packages, Installing, Loading, Getting Help on Packages, Useful Packages for Wrangling, Cleaning and Manipulation, Overview of R Data Types and usability, Integer vs. Double, Creating Integer & Double Vectors, Converting between Integer & Double values, Comparison Operators, Exact Quality Comparison, Floating Point Comparison, Character String Basics, Converting to Strings, Printing Strings, String Manipulation with Base R Package, Case Conversion, Character Replacement, String Abbreviations, Extract & Replace Strings, String Manipulation with stringr, Basic Operations, Duplicate Characters within a String, Removing Leading and Trailing Whitespaces, Pad a String with Whitespace, Character Manipulation and Pattern Matching Functions

SECTION B

Regex, Factors and Date Transformations: Regular Expressions, Regex Syntax, Metacharacters, Sequences, Character Classes, POSIX Character Classes, Quantifiers, Regex Functions, Main Regex Functions in R, Regex Functions in stringr, Creating, Converting and Inspecting Factors, Ordering Levels, Revalue Levels, Dropping Levels, Converting Strings to Dates, Extract & Manipulate Parts of Dates, Creating Date Sequences, Dealing with Time Zones & Daylight Savings.

SECTION C

Data Structure Manipulations: Creating Vectors, Lists, Matrices, Data Frames, Managing Vectors, Subsetting Vectors, Lists, Managing Matrices and Data Frames, Adding Attributes to Matrices & Data Frames, Subsetting Data Frames and Matrices, User Defined Functions, Pipe (%>%) Operator, Nested Option, Multiple Object Option, %>% Option.

SECTION D

Reshaping Data using tidyr: Making Wide Data Long, Making Long Data Wide, splitting a Single Column into Multiple Columns, Combining Multiple Columns into a Single Column, Additional tidyr Functions, Sequencing tidyr Operations, Selecting Variables of Interest select (), Filtering Rows using filter (), Grouping Data by Categorical Levels using group by (), Arranging Variables by Value using arrange (), Joining Data Sets using join (), Creating New Variables using mutate ().

References

1. Nathan Metzler. (2019). *An Introduction to R Programming with Tutorials and Hands-On Examples*. Independently Published.
2. Jared P. Lander. (2018). *R for Everyone*. Pearson.
3. Jeeva Jose. (2018). *Beginners Guide for Data Analysis using R Programming*. Khanna.
4. Mark Van Der Loo. (2018). *Statistical Data Cleaning with Applications in R*. Wiley.
5. Samuel E. Buttrey. (2017). *A Data Scientist's Guide to Acquiring, Cleaning and Managing Data in R*. Wiley.

Course Title/Code	**MULTIVARIATE DATA ANALYSIS**
Course Type:	IOA
Course Nature:	Elective
L-T-P-O Structure	0-0-4-0
Course Objectives	This module will help the students gain critical and practical knowledge in terms of Multivariate Statistics. The students will learn the concepts of Dimensionality Reduction, Multiple Regression, Canonical Correlations, Logistic Regression and Time Series Analysis.

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

SECTION A

Introduction & Data Pre-processing: Nature of Multivariate Analysis, Validity and Reliability, Types of Multivariate Techniques, PCA and Factor Analysis, Multiple Regression, Logistic Regression, Canonical Correlation, Conjoint Analysis, Cluster Analysis, Multi- Dimensional Scaling, Correspondence Analysis, Structural Equation Modeling, Multivariate Model Building, Graphical Examination of Data, Convert Un-Tidy Data into Tidy Data. Missing Data, Imputation of Missing Data by Central Tendency and KNN Method. Outliers, Winsorization of Outliers, Testing the Assumptions of Multivariate Analysis, Incorporating Non metric Data with Dummy Variables, Managerial Overview of the Results.

SECTION B

Logistic Regression: Binary Classification versus Point Estimation, Odds versus Probability, Logit Function, Classification Matrix, Individual Group Classification Efficiency, Overall Classification Efficiency, Receiver Operating

Characteristic Curve, Sensitivity, Specificity, Area Under ROC Curve, Cut-Offs, True Positive Rate and False Positive Rate.

SECTION C

Time Series Analysis – I: Nature of Time Series, Components of Time Series, Secular Trend, Seasonal Variations, Cyclical Variations, Irregular Variations, Time Series Decomposition, Smoothing Techniques, Moving Average, Weighted Moving Average, Exponential Smoothing, Double Exponential Smoothing, Regression Trend Analysis, Autocorrelation and Autoregressive.

SECTION D

Time Series Analysis – II: Tests for Stationarity, Graphical Method, Unit Root Test, Augmented Dickey Fuller Test, Phillips–Perron Test, Schmidt–Phillips Test, KPSS Test, Identification Of ARMA Models & Parameter Estimation, Testing Significance with Forecasting, Stationary Restriction for ARMA Models, ARIMA Models, Model Parameter Estimation, Testing Parameter Significance.

References

1. Hair, J. F. et al. (2015). *Multivariate Data Analysis*, 6th edition. NJ: Prentice Hall.
2. Enders, W. (2010). *Applied Econometric Time Series*. Hoboken, NJ: John Wiley & Sons.
3. Tabachnick, B. and Fidell, L (2007). *Using Multivariate Statistics*, New York: Allyn & Bacon.
4. Menard, S. (2002). *Applied Logistic Regression Analysis*. Thousand Oaks, CA: Sage.
5. Hamilton, J. D. (1994). Time Series Analysis. Princeton University Press.

Course Title/Code	**CREATIVITY INNOVATION & DESIGN THINKING**
Course Type:	Core (SMC)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The course is to recognize that knowledge is the most important resource and it holds the key to generating continuousinnovation.The students afterstudying this course will beable tomanageandunderstandtherelationshipamongstKnowledgeCreation,CriticalThinkingandInnovation.

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

CO1: Understand the concept, characteristics and levels of creativity and its relevance to innovation.
CO2: To understand & evaluate the models of Innovation & how to create a culture of Innovation (insights).

CO3: Gain, evaluate & analyze the potential of Innovation, in order to reduce uncertainty & sustain Profits with help of design thinking.
CO4: Creation & Implementation of the decision to adopt an idea towards design thinking.

SECTION A

Introduction to Knowledge Management and Innovation: Types of Knowledge and Implication for Knowledge Management, Knowledge Creation, Models of Innovation, The underpinning of Profits: Assets, Competences and Knowledge, Sources and Transfer of Innovation,

SECTION B

Creating a culture of Innovation: Innovation culture in an organization, Recognizing the potential of Innovation, Reducing Uncertainty, Strategic Choice or environmental Determinism,

Strategies for sustaining Profits, Innovation Vs Creativity, Managing for Innovation, Innovation and Knowledge Management

SECTION C

Design Thinking: Objectives and essence of Design Thinking, Theory of Design Thinking, Creative problem solving, the innovation of products and services within business and social contexts, Customer needs in Design Thinking

SECTION D

Design Thinking Innovation Process: Barriers and Enablers: Barriers and Enablers to Design Driven Innovation, , Typology of Design Driven Innovation, Applications of Design Thinking

Reference Books:

Mitsuru Kodama, Knowledge Innovation: Strategic management as practice; Edward Elgar Publishing Limited, 2007.

Kazuo Ichijo, Ikujiro Nonaka; Knowledge Creation and Management: New Challenges for Managers, Oxford University Press.

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Course Title/Code	**SKILL ENHANCEMENT- II**
Course Type:	CDC (Soft)
Course Nature:	University Compulsory
L-T-P-O Structure	0-0-4-0
Course Objectives	

	Sections	**Weightage**
Syllabus	A	25%
	B	25%
	C	25%
	D	25%

	TOT AL	100%

Course Outcomes: - By the end of this course the:
CO 1: Students will be able to recognize problems based on arithmetic & Data Analysis.
CO 2: Students will be able to solve problems based on Logical reasoning & simplification.
CO 3: Students will be able to calculate the correct answers to the problems within given time.
CO 4: Students will be able to hone their verbal ability skills.
CO 5: Students will be able to communicate effectively and impactful way
CO 6: Students will be able to ace their interview skills

Section A

Ratio & Proportion, Partnership, Average, Mixture & Alligation, Data Interpretation

Section B
Ranking, Syllogism, Logical Deduction, Time & Work
Section C

Building vocabulary, Synonym & Antonym, One word substitution, Voice change, Active & passive Voice, Spotting Errors, Ordering of Sentences, Completing statements/sentences, Strategic reading, Techniques for solving Reading Comprehension, Solving RC Passages, Para Jumbles

Section D

Handling different types of interviews, Preparing Interview Questions, Understanding the company through the website, LinkedIn profiles & Job portals

STRATEGIC MANAGEMENT

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
	Summer Internship	DMC	Hard	Core	0	0	3	0	3	3
	Big Data Analytics	DMC	Hard	Core	2	0	2	0	4	3
	Data Mining	DMC	Hard	Core	2	0	2		4	3
	Human Resource Management	DMC	Hard	Core	3	0	0	0	3	3
	Management Elective-II	DMC	Hard	Core	3	0	0	0	3	3
	Text Mining	DMC	Hard	Core	2	0	2	0	4	3
	Marketing Analytics	DMC	Hard	Core	2	0	2	0	4	3
	Skill Enhancement-III	CDC	Soft	University Compulsory	0	0	4	0	4	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					14	0	15		29	23

Note: Workshop on HR Analytics and Operations Analytics

Course Title/Code	**BIG DATA ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	2-0-2-0
Course Objectives	A Big Data ecosystem is the one with huge volumes of information and transaction data.The objective of the course is to learn tools and techniques to apply analytics on such data which would point to various business benefits including new revenue generation opportunities,better customer service,more effective marketing,better operational efficiency and a competitive edge over rivals. It will enable analysis of untapped data for business intelligence and analytics.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOT AL	100%

SECTION A

IntroductiontoBigData: Analytics – Nuances of big data – Value – Issues– Case for Big data – Big data optionsTeam challenge – Big data sources – Acquisition – Nuts and Bolts of Big data. Features ofBig Data - Security, Compliance, auditing and protection - Evolution of Big data – BestPractices for Big data Analytics - Big data characteristics - Volume, Veracity, Velocity,Variety – DataAppliance and Integration tools –Greenplum –Informatica,Big vs.Thick Data.

SECTION B

DataAnalysis & StreamComputing: Evolution of analytic scalability–Convergence–parallel processing systems–Cloud computing–grid computing–mapreduce–enterprise analytics and box–analytic datasets – Analytic methods – analytic tools – Cognos – Microstrategy - Pentaho. Analysis approaches–Statistical significance–business approaches–Analytic innovation–Traditional approaches–Iterative, 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 IBM Infosphere–Big data at rest–Infosphere streams – Data stage – Statistical analysis – Intelligent scheduler – Infosphere Streams.

SECTION C

Predictive Analytics and Visualization: Predictive Analytics – Supervised – Unsupervised learning – Neural networks – Kohonen models–Normal–Deviations from normal patterns–Normal behaviours–Expert options – Variable entry - Mining Frequent itemsets - Market basket model – Apriori Algorithm –Handling large data sets in Main memory – Limited Pass algorithm – Counting frequent item sets in a stream – Clustering Techniques – Hierarchical – K- Means – Clustering high dimensional data Visualizations - Visual data analysis techniques, interaction techniques;Systems and applications.

SECTION D

Predictive Analytics and Visualization II & Frameworks and Applications: Clustering Techniques–Hierarchical–K-Means–Clustering high dimensional data Visualizations- Visual data analysis techniques,interaction techniques; Systems and applications, IBM for Big Data – Map Reduce Framework - Hadoop – Hive - – Sharding – No SQL Databases- S3-Hadoop Distributed file systems –H base– Impala –Analyzing big data with twitter–Big data for E-Commerce–Big data for blogs.

ReferenceBooks
- Prajapati,V.(2013),Big Data Analytics with R and Hadoop,Packt tPublishing.
- Kudyba,S.(2014),BigData,Mining,andAnalytics:Components of Strategic Decision Making, Auerbach Publications.
- Minelli, M.Chambers, M Dhiraj, M. (2013), Big Data, Big Analytics: Emerging Business Intelligence and Analytic Trends for Today's Businesses,WileyPublications.
- Mayer-Schonberger& Cukier,K.(2013), BigData:A Revolution That Will Transform How We Live, Work and Think, Hodder And Stoughton.

Course Title/Code	**DATA MINING**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	2-0-2-0
Course Objectives	After this course students will gain critical knowledge and understanding about major Data Mining procedures like Decision Tree, Cluster Analysis, Neural Networks, and Support Vector Machines. Students will be able to apply and practice this gained knowledge in a variety of Real-World Scenarios.

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

SECTION A

Statistical Concepts & Linear Regression: Probability Distributions, Statistical Inferences, Level of Significance, Type I and Type II Error, One Sample, Paired Samples, Independent Samples T Tests, One Way ANOVA, Chi-Square Test. Linear Regression, Scatter Plot, Correlations, R Squared and Adjusted R Square, Testing of Slope, Standard Error of Estimate.

SECTION B

Logistic Regression & Decision Trees: Logit Function, Odds versus Probabilities, Classification Matrix, Cut-Offs, ROC Curve. Classification & Regression Trees, Information Gain, Gain Ratio, Gini Index, Mean Squared Error, Pruning of Tree, Bagging, Random Forest, Adaptive Boosting, XG Boosting, Model Overfitting.

SECTION C

Cluster Analysis & Support Vectors: Cluster Analysis versus Factor Analysis, Overview of Basic Clustering Methods, Agglomerative Hierarchical Clustering, Within-Group Linkage, Nearest Neighbor or Single Linkage, Furthest Neighbor or Complete Linkage, Centroid Clustering, Ward's Method, K-Means Algorithm, Dendrogram, Profiling of Cluster, Cluster Evaluation, Decision Boundaries for Support Vector Machine, Maximum Margin Hyperplanes, Structural Risk Minimization, Linear SVM-Separable Case, Linear SVM-Non-Separable Case, Kernel Function, Kernel Trick, Kernel Hilbert Space, Model Evaluation.

SECTION D

Introduction to Neural Networks: Structure of a Neural Network, Input Layer, Hidden Layer, Output Layer, Nodes, Synaptic Weights, Analogy with Biological Neural Network, Scaling of Data, Activation Functions, Hyperbolic Tangent, Sigmoid, Identity, Softmax, Optimization Algorithms, Scaled Conjugate Gradient, Gradient Descent, Model Accuracy, Deep Learning through Keras and H2O.

References
1. KolluruVenkataNagendra. (2021). *Concepts of Data Warehousing & Data Mining*. Notion Press.
2. Giuseppe Bonaccorso. (2020). *Mastering Machine Learning Algorithms*. Packt.
3. AurelienGeron. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras & Tensor flow*. O'Reilly.
4. Clinton Sheppard (2017). *Tree Based Machine Learning Algorithms*. Independent.
5. Pang-Ning Tan. (2016). *Introduction to Data Mining*. Pearson.

Course Title/Code	**HUMAN RESOURCE MANAGEMENT**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	3-0-0-0
Course Objectives	Upon successful completion of this course the student should be able to explain the understanding of the human side of organization which is central to their performance and effectiveness. This course considers how people, processes and structures interrelate. It focuses on developing an appreciation of the central importance of human resource strategies for all organizations.

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

SECTION A

Introduction & ManpowerPlanning: Human Resources Systems-Historical Evolution of the field; Role of Human Resource management in a competitive business environment; Factors influencing Human Resource Management; Strategic Human Resource Management, Objectives, Importance & Problems of HR Planning Job analysis, Determining Human ResourceRequirements; Hiring and Developing Human Resources, The process of forecasting, Definition, uses, Techniques of Job Analysis,Job Description & Job evaluation; Competency mapping; Talent Management.

SECTION B

Recruitment and Selection & Training and Development: Concept, identifying job recruitments, recruitment resources and efficacy. Selection, process and methods, Psychometric tests & its relevance, Interview technique, induction & placement, Training & Development Concept, need, strategy, Identification of needs, designing & implementing training programs Management Development, Evaluation of Training & development.

SECTION C

CompensationandPerformanceManagement: Performance Management–Concept and Practices Principle and objectives of Performance Appraisal and potential Evaluation, Feedback. Career planning, Succession Planning & Retention–Scope, concept Principles & Practices. The problems in managing & advantages.Compensation Management,Transfer, Promotion and RewardPolicies.

SECTION D

IndustrialRelations: Definition, concept, context of Industrial Relation, Discipline (Red hots tove principle of discipline), counseling, collective bargaining, Quality of work life; Safety and Health, Employee Welfare,Employee AssistanceProgrammes, Separation, Attrition, Human Resource Auditing, Human Resource Accounting, International Human Resources Management.

ReferenceBooks:
- DeCenzo, D.A.and Robbins, S.P.(10thed.,2011).Fundamentals of Human Resource Management. John Wiley.
- Torring to metal (2014), Human Resource Management,Pearson Education.

Course Title/Code	**MANAGEMENT ELECTIVE- II**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	3-0-0-0
Course Objectives	The objective of the course is to develop, amongst students, an understanding on various issues, approaches and practices of compensation management and ability to design,analyze and restructure reward management policies,systems and practices.

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

SECTION A

Introduction & Compensation System Design Issues: Compensation: meaning, objectives, nature of compensation. Nature & Significance of wage, salary administration, essentials-Minimum wage–Fair wage,Real wage,IssuesandConstraintsinWage DeterminationinIndia, CompensationPhilosophies,compensation approaches,decision about compensation,compensation- base to pay,individual Vs. team rewards, Perceptions of pay Fairness, legal constraints on pay systems.

SECTION B

ManagingCompensation: Strategic Compensation planning, determining compensation-the wage mix, Development of a Base Pay System: Job evaluation systems, the compensation structure-Wage and salary surveys, the wage curve, pay grades and rate ranges, preparing salary matrix, government regulation on compensation, fixing pay, significant compensation issues,Compensation as a retention strategy.

SECTION C

VariablePayandExecutiveCompensation: Strategic reasons for Incentive plans, administering incentive plans, Individual incentive plans-Piecework, Standard hour plan, Bonuses, Merit Pay, Group incentive plans- Team compensation, Gain sharing incentive Plans,

Enterprise incentive plans- Profit Sharing Plans,StockOptions,ESOPs,EVA.Executivecompensation,elements executive compensation andit management,Internationalco

SECTION D

ManagingEmployeeBenefits: Benefits-meaning,strategic perspectives benefits-goalsfor benefits,benefits need analysis, funding benefits, benchmarking benefit schemes, nature and types of benefits,Employee benefits programs- security benefits, retirement security benefits, health care benefits, time-off benefits, benefits administration, employee benefits required by law,discretionary major employee benefits,creatingaworklifesetting,employee services- designing benefits package.

ReferenceBooks:

- Singh,B.D.(2007),CompensationandRewardManagement.ExcelBooks.
- Gerhart,B.& Rynes,S.L.(2008),Compensation,Evidence,andStrategicImplications.SagePublication.

Course Title/Code	**TEXT MINING**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	2-0-2-0
Course Objectives	The course introduces the concepts of Text Mining, Unstructured Information Analysis for better decision making by deriving valuable insights. The course will help the students understand the roots behind Text Mining which evolved from Machine Learning, Natural Language Processing and Statistics. Upon completion, students are expected to be able to describe basic concepts and methods of Text Mining, Information Extraction, Text Classification and Clustering, Topic Modelling.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOT AL	100%

SECTION A

Introduction & Feature Extraction: Basics of Text Mining, Natural Language Content Analysis, Core Text Mining Operations, Associations, Using Background Knowledge for Text Mining, Domain Ontologies, Domain Lexicons. Text Mining Preprocessing Techniques, Task Oriented Approaches, NLP Tasks, Tokenization, Part-of-Speech Tagging, Syntactic Parsing and Shallow Parsing, Finding Implicit Features, Finding Opinion Phrases and their Polarity, Context-Specific Word Semantic Orientation, Analysis of Word, and Document Frequency, tf-idf, Zipf's Law, bind tf_idf Function, Subsequence Kernels for Relation Extraction, Capturing Relation Patterns with a String Kernel.

SECTION B

Text Categorization & Clustering: Applications of Text Categorization, Document Representation, Knowledge Engineering Approach to Text Categorization, Machine Learning Approach to Text Categorization, Evaluation of Text Classifiers, Clustering Tasks in Text Analysis, Clustering Algorithms and Clustering of Textual Data.

SECTION C

Relationship Extraction: Tokenizing by N-gram, Counting and Filtering N-gram, Analyzing Bigrams to provide Context in Sentiment Analysis, visualizing a Network of Bigrams using graph, Counting and Correlating Pairs of Words with the widyr Package, Counting and Correlating among Sections, Examining Pairwise Correlation.

SECTION D

Topic Modelling & Probabilistic Modelling: Latent Dirichlet Allocation, Word Topic Probabilities, Per-Document Classification, By-words Assignments, Alternative LDA Implementations, Hidden Markov models, Stochastic Context Free Grammar, Conditional Random fields, Parallel Learning Algorithms.

References
- Julia Silge, David Robinson. (2018). *Text Mining with R - A Tidy Approach*. O'Reilly.
- Matthew L. Jockers. (2014). *Text Analysis with R for Students of Literature*. Springer.
- James Pustejovsky, Amber Stubbs. (2012). *Natural Language Annotation for Machine Learning*. O'Reilly.
- Steve R. Poteet. (2007). *Natural Language Processing with Text Mining*. Springer.
- James Sanger. Ronen Feldman. (2002). *The Text Mining Handbook: Advanced Approaches in Analyzing Unstructured Data*. Cambridge.

Course Title/Code	**MARKETING ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	2-0-2-0
Course Objectives	The objective of the course is to thoroughly understand the marketing dynamics and get accustomed with various marketing methods so that an efficient decision is made which would even work in diversified settings. A successful marketing strategy involves efficient decision making,where decisions could range from product pricing,selection of a distribution channel, planning the product advertisement or any other. The course would enable an effective course of action by analyzing data with quantitative marketing methods.

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

SECTION A

IntroductionandMarketInsight & MarketSegmentationandCompetitiveAnalysis: Introductiontomarketinganalytics,modelsandmetrics,MarketInsight:Marketterminology, market data sources, market sizing, pestle market analysis, porter five forcesanalysis, and Marketsegmentation:marketsegmentation,markettargeting,marketpositioning.CompetitiveAnalysis:Competitiveinformation,analysisandaction.

SECTION B

Businessstrategyandoperations & ProductandServiceanalytics,Priceanalytics: Business strategy: strategic scenarios, strategic decision models, strategic metrics, Businessoperations:forecasting,predictiveanalysis,datamining,balancedscorecard,criticalsuccessfactors, Conjoint analysis,decisiontree models,portfolio resource allocation,product and servicemetrics,attributepreferencetesting.Priceanalytics:pricingtechniquesandassessments,profitablepricing,pricingforbusinessmarkets, pricediscrimination.

SECTION C

DistributionAnalyticsandPromotionAnalytics:
DistributionAnalytics:Distributionchannelcharacteristics,retaillocationselection,channel evaluation and selection, multi-channel distribution, distribution channel metrics.PromotionAnalytics:Promotionbudgetestimation,promotionbudgetallocation,promotionmetrics fortraditionaland socialmedia

SECTION D

SalesAnalyticsandAnalyticsinAction:
SalesAnalytics:Consumersalesprocess,ecommercesalesmodel,salesmetrics,profitabilitymetrics,supportmetrics.AnalyticsinAction:Rapiddecisionmodels,metricsinmarketingcampaigns,excelexcellence,datadrivenpresentations.

ReferenceBooks:
- Artun,O.,Levin,D.(2015),PredictiveMarketing:EasyWaysEveryMarketerCanUseCustomer Analytics andBigData,AgileOne.
- Grigsby,M.(2015), MarketingAnalytics:Apracticalguidetorealmarketingscience,KoganPageLimited.
- Venkatesan,R.,Farris,P.,Wilcox,R.T.(2014),CuttingEdgeMarketingAnalytics:RealWorldCasesandDataSetsforHandsOnLearning,PearsonEducation.
- Bendle,N.T.,Farris,P.W.,Pfeifer,P.E.,Reibstein,D.J.MarketingMetrics,PearsonEducation,ThirdEdition.

Course Title/Code	**SKILL ENHANVEMENT- III**
Course Type:	CDC (Soft)
Course Nature:	University Compulsory
L-T-P-O Structure	0-0-4-0
Course Objectives	

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

Course Outcomes: - By the end of this course the:

CO 1: Students will be able to recognize problems based on Calculations & Possibilities.

CO 2: Students will be able to solve problems based on verbal reasoning.

CO 3: Students will be able to calculate the correct answers to the problems within given time.

CO 4: Students will be able to Hone personal strengths and acquire skills required for self-branding

CO 5: Students will be able to build on attributes, values and credibility to confidently display leadership and team skills.

CO 6: Students will be able to identify career path and communicate effectively in a multicultural global environment

Section A

Time Speed & Distance, Permutation & Combination, Probability

Section B

Inequalities, Data Sufficiency, Seating Arrangement

Section C

Managing stress, Handling time, Emotional Intelligence, Decision Making, Defining the goals, Critical Thinking, Interpersonal skills, Problem Solving

Section D

Active and Reflective communication, Adaptability, Creativity, Team Dynamics, Conflict Management, Collaboration, leadership skills, The art of networking.

	SEMESTER IV									
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/ Elective/ University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
	Performance Management System	DMC	Hard	Core	3	0	0	0	3	3
	Entrepreneurship Development	DMC	Hard	Core	3	0	0	0	3	3
	Project Management	DMC	Hard	Core	3	0	0	0	3	3
	Supply Chain and Logistics	DMC	Hard	Core	2	0	2	0	4	3
	Advanced Machine Learning	DMC	Hard	Core	2	0	2	0	4	3
	Financial Analysis	DMC	Hard	Core	2	0	2	0	4	3
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					15	0	6	0	21	18

Course Title/Code	**PERFORMANCE MANAGEMENT SYSTEMS**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	This course aims to impart the understanding about the performance and compensation management system and strategies adopted by the organizations to manage employees' performance. This course also intends to give insights on how to identify, integrate, and retain talent in an organization to deliver high performance.

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

SECTION A

Conceptual Framework of Performance Management: Performance management process; Objectives of performance management system; Historical development in India; Performance management and performance appraisal; Linkage of performance management system with other HR practices. Components of Performance Management System: Performance planning; Ongoing support and coaching; Performance measurement and evaluation; Performance management and appraisal; Methods of performance appraisal; Appraisal Communication; Counseling, Identifying potential for development; Linking pay with performance.

SECTION B

Implementation and Issues in Performance Management: Implementing performance management system- Strategies and challenges; Characteristics of effective performance metrics; Role of HR professionals in performance management; Performance management as anaidtolearningandemployeeempowerment;Performancemanagementdocumentation;Performancemanagementaudit;Ethicaland legal issues in performance management; Use of technology and e-PMS, Performance management practices in Indian organizations. Talent

Management: Concept and approaches; Framework of talent management; Talent identification, integration, and retention. Unit V-Talent Management Practices and Process: Building the talent pipeline; Managing employee engagement; Key factors and different aspects of talent management; Using talent management processes to drive culture of excellence; Talent management in India; Future directions in talent management practice and researchproblem

SECTION C

CompensationManagement: An Introduction: Compensation Management, Compensation and Non-compensation Dimensions, 3-P Concept in Compensation Management, Compensation as Retention Strategy, Compensation for Special Groups, Significant Compensation Issues Compensation Strategy: New Thinking for the New Millennium: Pay the Person, Reward Excellence, Individualizing the Pay System, Organizational and External Factors Affecting Compensation Strategies, Compensation Strategies as an Integral Part of HRM, Compensation Policies

SECTION D

Managerial Remuneration: Managerial Remuneration – Concept and Elements, Executive Compensation: Methodology, CEO-to-worker pay ratio, Rewarding – A New Approach, Remuneration Ceilings, Remuneration Ceilings under Section XIII, Benchmark Compensation Package as per the Industry Standards Performance Linked Compensation: Performance management, Performance Appraisal and Measurement, Pay for Performance Plans, Balancing of Internal and External Equity;Pay Structures:Performance Based and Pay Based Structures, Designing Pay Structures, Comparison in Evaluation of Different Types of Pay Structures, Designing Pay

RangesandBands,SignificanceofFactorsAffectingpaylevels;Rewards&Recognition:ConceptofRewardManagement,Developing Reward Policies, Reward Strategy, Developing Total Reward Approach, Reward Management in Service Sector, Total Reward Framework of Service Industries in India, Factors affecting Reward Management Policies in Service Sector, Process of Designing a Successful Reward Strategy; International Compensation: Expatriate Compensation and its Objectives, Elements of Expatriate's Compensation Package, Problems in CompensationManagement

References:

- Armstrong, M. & Baron, A., Performance management and development, Jaico Publishing House, Mumbai,2006.
- Armstrong, M., Performance management: Key strategies and practical guidelines, 2nded, Kogan Page, London,2000
- T.V Rao, Performance Management: Toward Organizational Excellence, 2nded, Sage Publications,2015.
- Bagchi, S. N., Performance management, 2nded, Cengage Learning India,2013
- Bhattacharyya, D.K., Performance management systems and strategies, 1sted, Pearson Education,2011
- Robert B., Performance management, 2nded, McGraw-Hill Education India,2012
- Larry Isrealite,ASTD,Talentmanagement:Strategies for success from six leading companies,1st ed,Cengage Learning,2010

Course Title/Code	**ENTREPRENEURSHIP DEVELOPMENT**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The course aims to develop the entrepreneurship skills and create an understanding towards the business model development.This course will help the students to convert their business ideas into successful ventures.

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

SECTION A

Entrepreneurship: Concept and Definitions; Entrepreneurship and Economic Development; Factor Affecting Entrepreneurial Growth – Economic, Non-Economic Factors; Classification and Types of Entrepreneurs; Entrepreneurial Competencies; EDP Programs; Entrepreneurial Training; Traits/Qualities of an Entrepreneurs; ManagerVs. Entrepreneur; Entrepreneur Vs.Entrepreneurship; Entrepreneur Vs. Administrator.

SECTION B

Opportunity/IdentificationandProductSelection: Opportunity / Identification and Product Selection: Entrepreneurial Opportunity Search and Identification; Sources of Information; Criteria to Select a Product; Conducting Feasibility Studies; Marketing Feasibility, Technical Feasibility, Finance Feasibility, HR Feasibility etc.;Business Plan Formulation; Format of Business Plan with Practical example; Project Report Preparation; Specimen of Project Report.

SECTION C

Enterprise Launching Formalities: Definition of Small Scale as per MSMED Act, 2006; Rationale; Objective; Scope; steps involved in starting enterprise; SME; Registration; NOC from Pollution Board; Machinery and Equipment Selection; Role of SME in Economic Development of India; Project Planning and Scheduling using Networking Techniques of PERT/CPM; Methods of ProjectAppraisal.

SECTION D

Role of Support Institutions and Management of Small Business: Role of Director of Industries, DIC, DC MSME, SIDBI, Small Industries Development Corporation (SIDC), MSME (D-I), NSIC, NIESBUD, State Financial Corporation (SFC); Functional areas application for Small Enterprises like Marketing Management issues; Production Management issues;Finance Management issues; Human Resource Management issues;Export Marketing.

ReferencesBooks:

- Charantimath (2013), Entrepreneurship Development and Small Business Enterprise, Pearson Education.
- TaingKalpana(2014),Entrepreneurship Theory and Practice, Anmol Publication Pvt.Ltd, Delhi.

Course Title/Code	**PROJECT MANAGEMENT**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	To provide the students with an integrated view of project management, sensitizing them about the complexities involved in managing projects and equipping them with techniques for effective project management.

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

SECTION A

Project Management Principles & Planning the Project: Definition of project, project management processes and other key concepts,principles of project management, roles and responsibilities of the project manager, project life cycle, causes of project failures, project planning process, project charter and project plan,work breakdown structure(WBS) techniques,project structuring and organization considerations, change management and conflict resolution issues.

SECTION B

Estimating Project Costs & Estimating Project Time: Type of costs,Elements of budget,approaches for estimating cost and budget,Factors influencing quality of estimates, Activity sequencing, Estimating time, precedence network diagram, critical path method, program evaluation and review techniques,project scheduling,basics of scheduling.

SECTION C

Project Quality Management: An Overview of PQM processes and the integration with Project Management Plan.

SECTION D

Managing Risks,Project Control and Performance Management: Risk concept and identification, risk assessment, prioritizing risks, risk response planning,Project tracking and control elements, Earned Value Management, Factors contributing to successful project control,Measures of project success.

ReferenceBooks:
- CharvatJ.(2003)Project Management Methodologies:Selecting, Implementing and Supporting Methodologies and Processes for projects.2003:
- John Wiley&Sons. PMI,A Guide to the Project Management Body of Knowledge.

Course Title/Code	**ADVANCED MACHINE LEARNING**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The objective of the course is to understand machine learning methods for various problems where human expertise is not present, or where humans are unable to identify the reason behind their expertise, or where problem size is too huge for humans to comprehend solutions or where solutions are context specific. The course will introduce topics which include Bayesian statistics,Markov modeling, graphical model structure learning, deep learning and Gaussian processes.

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

SECTION A

Unsupervised Learning & Bayesian Statistics: Introduction, Association rules, Cluster analysis, Self-organizing maps, Principal components, curves and surfaces, non-negative matrix factorization, independent component analysis, multidimensional scaling,nonlinear dimension reduction, the Google Page rank algorithm, Introduction, Summarizing posterior distributions, Bayesian model selection, Priors, Hierarchical Bayes, Empirical Bayes, Bayesian decision theory.

SECTION B

Markov and Hidden Markov Models & Additive Models, Trees and Boosting: Introduction, Markov models, Hidden Markov models, Inference in HMMs, Learning from HMMs, Generalizations of HMMs, Generalized Additive Models, Tree based methods, PRIM:Bump hunting, MARS, Hierarchical mixture of experts, missing data, computational considerations. Boosting methods, boosting fits an additive model, forward stage wise additive modeling, exponential loss and ada boost,why exponential loss, loss functions and robustness,off the shelf procedures for data mining, boosting trees,right sized trees, regularization, and interpretation.

SECTION C

Graphical Model Structure Learning: Introduction, Learning tree structures, learning DAG structures, Learning DAG structures with latent variables, learning casual DAG's, learning undirected Gaussian graphical methods, learning undirected discrete graphical methods.

SECTION D

DeeplearningandGaussianProcess: Deep learning:Introduction,Deep generative models, Deep neural networks, applications of deep networks. Gaussian Processes: Introduction, GPs for regression, GPs meet GLMs,Connection with other methods,GPlatent variable model.

Reference books

- Bishop,C.M.(2007).Pattern Recognition and Machine Learning,Springer.
- Hearty, J(2016),Advanced Machine Learning with Python,Packt publishing.
- Barber,D.(2012),Bayesian Reasoning and Machine Learning,CambridgeUniversityPress.
- MacKayJ.C.D.(2005),InformationTheory, Inference and Learning Algorithms,Cambridge University Press.

Course Title/Code	**FINANCIAL ANALYSIS**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	3-0-0-0
Course Objectives	The objective of the course is to empower the ability to create and interpret effective financial models for corporate finance. The course provides a step by step process of creating an integrated financial model which would project the future financial performance of a company, which can be used by financial advisory firms, equity research, and banking sector likewise.

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

SECTION A

CorporateFinanceandValuation–I & CorporateFinanceandValuation–II

BasicFinancialCalculations:Overview,PresentValueandNetPresentValue,InternalRateofReturn(IRR)andLoanTables,MultipleIRR,FlatPaymentSchedules,FutureValues and Applications, Pension Problem, Continuous Compounding, Discounting UsingDated Cash Flows. Corporate Valuation Overview: Four Methods to Compute EnterpriseValue, Using Accounting Book Values to Value a Company, Efficient Markets Approach, Enterprise Value & Free Cash Flows,Consolidated Statement ofCash Flows.Calculating the Weighted Average Cost of Capital (WACC):Overview, Computing Firm's Equity, Firm's Debt, Firm's Tax Rate, Firm's Cost of Debt, Firm'sCost of Equity, Implementing the Gordon Model, Valuation Based on the Consolidated Statement of Cash Flows: Overview, Free Cash Flow(FCF): Measuring the CashProduced by the Business, Reverse Engineering the Market Value. ProForma Financial Modeling: Overview, How Financial Models Work:Theory and an Initial Example, Free Cash Flow (FCF): Measuring Cash Produced by

Business,Using FCF to Value the Firm, Valuation Procedure, Modeling of Fixed Assets, Sensitivity Analysis, Debt as a Plug, Incorporating in ProForma.

SECTION B

PortfolioModels: PortfolioModels- Introduction:Overview, Computing Returns for Apple (AAPL) and Google(GOOG), Portfolio Means and Variances, Envelope Portfolios. Calculating Efficient Portfolios:Overview, Definitions and Notation, Five Propositions on Efficient Portfolios and the CAPM. Calculating theVariance-Covariance Matrix: Overview, Computing the Sample Variance-Covariance Matrix,Correlation Matrix,Computing the Global Minimum Variance Portfolio (GMVP), Four Alternatives to the Sample Variance-Covariance,Using Option Information to Compute the Variance Matrix.

SECTION C

Valuation of Options: IntroductiontoOptions:Overview,BasicOptionDefinitions,OptionPayoffandProfitPatterns, Option Strategies, Option Arbitrage Propositions. The Binomial Option Pricing Model:Overview, Two-Date Binomial Pricing,State Prices.The Black-Scholes Model: Overview, The Black-Scholes Model, Black-Scholes Pricing Function,Calculating the Volatility ,Implied Volatility,Dividend Adjustments to the Black-Scholes, Pricing Structured Securities,Bang for the Buck with Options, Black(1976) Model for Bond Option Valuation.

SECTION D

ValuingBonds   **&MonteCarloMethods:**
Duration:Overview,DurationPatterns,BondwithUnevenPayments,Non-FlatTermStructuresandDuration.ImmunizationStrategies:Overview, Model of Immunization,Convexity.ModelingtheTerm Structure:Overview, Basic Example,Several Bonds with the Same Maturity, Fitting a Functional Form to the Term Structure, The Properties of theNelson-SiegelTermStructure,TermStructureforTreasuryNotes, An Introduction to Monte Carlo Methods: Overview, Computing π Using Monte Carlo, AMonte Carlo Simulation of the Investment Problem. Simulating Stock Prices: Overview,What Do Stock Prices Look Like? Log normal Price Distributions and Geometric Diffusions, Lognormal Distribution Look, Simulating Log normal Price Paths,Technical Analysis,Calculating the Parameters of the Lognormal Distribution from Stock Prices.

ReferenceBooks
- Lemieux,V.L.(2012),Financial Analysis and Risk Management: Data Governance, Analytics and Life Cycle Management, Springer.
- Van Deventer, D.R. & Imai, K. (1996), Financial Risk Analytics: A Term Structure Model Approach for Banking, Insurance and Investment Management, Irwin Professional Publishing.
- Ryzhov,P.(2013),Haskell Financial Data Modeling and Predictive Analytics, Packt Publishing.
- Benett, M.J. &Hugen, D.L. (2016), Financial Analytics with R: Building a Laptop Laboratory for DataScience, Cambridge University Press

Domain Electives (Choose any four from the group)

S. No.	Paper	L	T	P	O	Credits	Distribution of Course
1	Advanced Machine Learning		-	-	-	3	Elective
2	Marketing Analytics		-		-	3	Elective
3	Pricing Analytics		-		-	3	Elective
4	Financial Analytics		-		-	3	Elective
5	Retail Analytics		-		-	3	Elective
6	HR Analytics		-		-	3	Elective
7	Social Media and Web Analytics		-		-	3	Elective
8	Healthcare Analytics		-		-	3	Elective
9	Operations and Supply Chain Analytics				-	3	Elective
			-				
10	Data Management and Ethics		-		-	3	Elective
11	Digital Marketing Analytics		-		-	3	Elective

Course Title/Code	**ADVANCED MACHINE LEARNING**
Course Type:	Core (Departmental)
Course Nature:	Hard
L-T-P-O Structure	
Course Objectives	Theobjectiveofthecourseistounderstandmachinelearningmethodsforvariousproblems where human expertise is not present, or where humans are unable to identify thereason behind their expertise, or where problem size is too huge for humans to comprehendsolutions or where solutions are context specific. The course will introduce topics which include Bayesian statistics,Markov modeling,graphical model structure learning, deep learning Gaussian processes.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOT AL	100%

SECTION A

Unsupervised Learning & Bayesian Statistics: Introduction, Association rules, Cluster analysis, Self-organizing maps, Principal components, curves and surfaces, non-negative matrix factorization, independent component analysis, multidimensional scaling, nonlinear dimension reduction, the Google Page rank algorithm, Introduction, Summarizing posterior distributions,Bayesian model selection,Priors ,Hierarchical Bayes, Empirical Bayes,Bayesian decision theory.

SECTION B

Markov and Hidden Markov Models & Additive Models, Trees and Boosting: Introduction, Markov models, Hidden Markov models, Inference in HMMs, Learning from HMMs, Generalizations of HMMs, Generalized Additive Models, Tree based methods, PRIM:Bump hunting, MARS, Hierarchical mixture of experts, missing data, computational considerations. Boosting methods, boosting fits an additive model, forward stage wise additive modeling, exponential loss and ada boost,why exponential loss,loss functions and robustness,off the shelf procedures for data mining, boosting trees,right sized trees,regularization, and interpretation.

SECTION C

Graphical Model Structure Learning: Introduction, Learning tree structures, learning DAG structures, Learning DAG structures with latent variables, learning casual DAG's, learningundirectedGaussiangraphicalmethods,learning undirected discrete graphical methods.

SECTION D

Deep learning and Gaussian Process: Deep learning: Introduction, Deep generative models,deep neural networks, applications of deep networks. Gaussian Processes: Introduction, GPs for regression, GPs meet GLMs,Connection with other methods,GP latent variable model.

Reference books

- Bishop,C.M.(2007). Pattern Recognition and Machine Learning, Springer.
- Hearty,J(2016),Advanced Machine Learning with Python,Packt publishing.
- Barber,D.(2012),Bayesian Reasoning and Machine Learning,Cambridge University Press.
- MacKayJ.C.D.(2005), Information Theory, Inference and Learning Algorithms,Cambridge University Press.

Course Title/Code	**MARKETING ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The objective of the course is to thoroughly understand the marketing dynamics and get accustomed with various marketing methods so that an efficient decision is made which would even work in diversified settings. A successful marketing strategy involves efficient decision making,where decisions could range from product pricing,selection of a distribution channel, planning the product advertisement or any other. The course would enable an effective course of action by analyzing data with quantitative marketing methods.

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

SECTION A

Introduction and Market Insight & Market Segmentation and Competitive Analysis: Introduction to marketing analytics,models and metrics, Market Insight:Market terminology, market data sources, market sizing, pestle market analysis, porter five forces analysis, and Market segmentation: market segmentation, market targeting, market positioning. Competitive Analysis: Competitive information,analysis and action.

SECTION B

Business strategy and operations & Product and Service analytics, Price analytics: Business strategy: strategic scenarios, strategic decision models, strategic metrics, Business operations:forecasting,predictive analysis,data mining,balanced scorecard,critical success factors, Conjoint analysis, decision tree models,portfolio resource allocation,product and service metrics, attribute preference testing. Price analytics:pricing techniques and assessments, profitable pricing, pricing for business markets, price discrimination.

SECTION C

Distribution Analytics and Promotion Analytics: DistributionAnalytics: Distribution channel characteristics, retail location selection, channel evaluation and selection, multi-channel distribution, distribution channel metrics.PromotionAnalytics:Promotion budget estimation,promotion budget allocation,promotion metrics for traditional and social media

SECTION D

Sales Analytics and Analytics in Action: Sales Analytics:Consumer sales process, e-commerce sales model,sales metrics,profitability metrics,support metrics. Analytics in Action: Rapid decision models, metrics in marketing campaigns,excel excellence,data driven presentations.

ReferenceBooks:

● Artun,O.Levin, D.(2015),Predictive Marketing: Easy Ways Every Marketer Can Use Customer Analytics and Big Data, Agile One.
● Grigsby,M.(2015),   Marketing Analytics:A practical guide to real marketing science, Kogan Page Limited.
● Venkatesan,R.Farris,P.Wilcox,R.T.(2014),Cutting Edge Marketing Analytics: Real World Cases and Data Sets for Hands on Learning, Pearson Education.
● Bendle, N.T. Farris, P.Pfeifer, P.E., Reibstein,D.J.Marketing Metrics,Pearson Education,ThirdEdition.

Course Title/Code	**PRICING ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The course aims to impart knowledge to perform both price analysis along with cost analysis to ensure that pricing is correct with respect to its reasonableness, profitability and customer expectations. The course would determine the choice of best pricing framework by evaluating various pricing strategies, price levels and pricing metrics.

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

SECTION A

Introduction:Tactical Pricing and Pricing Strategy: Changing the Pricing Game to Drive Profitable Growth, Why Pricing Is Often Ineffective, TheCost-Plus Delusion, Customer-Driven Pricing,Competition-Driven Pricing, TheDiscipline of Strategic Pricing. Pricing Strategy: An Integrated Approach,The Strategic Pricing Pyramid,Value Creation,Price Structure,Price and Value Communication, Pricing Policy, Price Level.

SECTION B

Value Creation and Price Structure: The Source of Pricing Advantage,TheRoleofValueinPricing,EconomicValueEstimation: An Illustration, The High Cost of Shortcuts, How to Estimate Economic Value,The Strategic Importance of EVE,Value-Based Market Segmentation; Price Structure: Segmentation Pricing Tactics for Separating Markets,PriceMetrics,Performance-Based Metrics,The Need for Cost-Based Metrics:Segmentation Pricing Fences,Segmenting by Buyer Identification, by Purchase Location, by Time of Purchase, by Purchase Quantity, byProduct Bundling, by Tie-ins and Metering, by Product Design, Importance of Segmented Pricing

SECTION C

Price&ValueCommunication & Pricing policy: Strategies to Influence Willingness-to-Pay,Value Communication, The Cost-Benefit Mix, Market Segments and Differentiated Values, Price Communication, Pricing Policy-Managing Customer Expectations and Behaviors,Organizing for Policy-based Pricing, Creating and Managing Pricing Policies Strategically, Diagnosis,Policy Development, Implementing Policies.

SECTION D

PriceLevels & Cost: Costs: How Should They Affect Pricing Decisions? The Role of Costs in Pricing,Why Incremental Costs? Estimating Relevant Costs, Activity Based Costing Percent Contribution Margin and Pricing Strategy, Managing Costs in Transfer Pricing

ReferenceBooks
- Ferguson, M.& Bodea,T.(2012),PricingSegmentation andAnalytics,BusinessExpertPress.
- Meehan,J.M.,Simonetto,M.,MOntan,L.& Goodin,C.(2011),Pricing and Profitability Management: A Practical Guide for Business Leaders, John Wiley &Sons.
- Ferguson,M.& Bodea, T. (2014), Segmentation, Revenue and Pricing Analytics,Routledge.
- Schindler,M. (2012), Pricing Strategies: A Marketing Approach, SAGE

Course Title/Code	**FINANCIAL ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The objective of the course is to empower the ability to create and interpret effective financial models for corporate finance.The course provides a step by step process of creating an integrated financial model which would project the future financial performance of a company, which can be used by financial advisory firms, equity research,and banking sector likewise.

<table>
<tr><td rowspan="6">**Syllabus**</td><td>**Sections**</td><td>**Weightage**</td></tr>
<tr><td>A</td><td>25%</td></tr>
<tr><td>B</td><td>25%</td></tr>
<tr><td>C</td><td>25%</td></tr>
<tr><td>D</td><td>25%</td></tr>
<tr><td>TOT AL</td><td>100%</td></tr>
</table>

SECTION A

Corporate Finance and Valuation–I: Basic Financial Calculations:Overview, Present Value and Net Present Value,Internal Rate of Return(IRR) and Loan Tables, Multiple IRR, Flat Payment Schedules, Future Values and Applications, Pension Problem, Continuous Compounding, Discounting UsingDated Cash Flows. Corporate Valuation Overview: Four Methods to Compute EnterpriseValue, Using Accounting Book Values to Value a Company, Efficient Markets Approach,Enterprise Value &Free CashFlows,Consolidated Statement ofCash Flows. Calculating the Weighted Average Cost of Capital(WACC): Overview,Computing Firm's Equity,Firm's Debt, Firm'sTax Rate,Firm's Cost of Debt, Firm's Cost of Equity, Implementing the Gordon Model.

SECTION B

Corporate Finance and Valuation–II & Portfolio Models: Valuation Based on the Consolidated Statement of Cash Flows: Overview, Free Cash Flow(FCF): Measuring the CashProduced by the Business, Reverse Engineering theMarketValue.Pro Form a Financial Modeling:Overview, How Financial Models Work: Theory and an Initial Example, Free Cash Flow (FCF): Measuring Cash Produced by Business, Using FCF to Value the Firm, Valuation Procedure, Modeling of Fixed Assets, Sensitivity Analysis,Debtas a Plug, Incorporating in ProForma, Portfolio Models—Introduction: Overview, Computing Returns for Apple (AAPL) and Google(GOOG), Portfolio Means and Variances, Envelope Portfolios. Calculating Efficient Portfolios:Overview, Definitions and Notation, Five Propositions on Efficient Portfolios and the CAPM. Calculating the Variance-Covariance Matrix: Overview, Computing the Sample Variance-Covariance Matrix, Correlation Matrix,Computing the Global Minimum Variance Portfolio (GMVP),Four Alternatives to the Sample Variance- Covariance,Using Option Information toCompute the Variance Matrix.

SECTION C

ValuationofOptions & ValuingBonds: IntroductiontoOptions:Overview,BasicOptionDefinitions,OptionPayoffandProfitPatterns, Option Strategies, Option Arbitrage Propositions. The Binomial Option Pricing Model: Overview, Two-Date Binomial Pricing, State Prices.The Black-Scholes Model:Overview, TheBlack-Scholes Model, Black-Scholes Pricing Function, Calculating the Volatility, Implied Volatility, Dividend Adjustments to the Black-Scholes, Pricing Structured Securities, Bang for the Buck with Options, Black(1976)Model for Bond Option Valuation, Duration:Overview, Duration Patterns,Bond with Uneven Payments, Non-Flat Term Structures and Duration. Immunization Strategies: Overview, Model of Immunization, Convexity. Modeling the Term Structure: Overview, Basic Example, Several Bonds with the Same Maturity, Fitting a Functional Form to the Term Structure, The Properties of the Nelson-Siegel Term Structure,Term Structure forTreasuryNotes.

SECTION D

MonteCarloMethods: An Introduction to Monte Carlo Methods: Overview, Computing Using Monte Carlo, A Monte Carlo Simulation of the Investment Problem. Simulating Stock Prices: Overview,What Do Stock Prices Look Like? Log normal Price Distributions and Geometric Diffusions, Log normal Distribution Look,Simulating Log normal Price Paths,Technical Analysis,Calculating the Parameters of the Log normal Distribution from Stock Prices.

ReferenceBooks

- Lemieux,V.L.(2012),Financial Analysis and Risk Management:Data Governance, Analytics and Life Cycle Management, Springer.
- Van Deventer, D.R. & Imai, K. (1996), Financial Risk Analytics: A Term Structure Model Approach for Banking, Insurance and Investment Management, Irwin Professional Publishing.
- Ryzhov,P.(2013),Haskell Financial Data Modeling and Predictive Analytics, Packt Publishing.
- Benett, M.J. & Hugen, D.L. (2016), Financial Analytics with R: Building a Laptop Laboratory for Data Science,Cambridge University Press.

Course Title/Code	**RETAIL ANALYSIS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The objective of the course is provide a powerful tool for making critical marketing andprocurement decisions by assessing analytical data on various things such as supply chain,storedesign,producttermsetc.Thecoursewouldprovidedetailedknowledgeaboutanalyzing market and retail data which would help in evolving the process of retailing andhelpinmakingbetterdecisions.

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

SECTION A

An Introduction to Retailing Analytics & Retail & DataAnalytics: The objective of the course is provide a powerful tool for making critical marketing and procurement decisions by assessing analytical data on various things such as supply chain,store design,product terms etc.The course would provide detailed knowledge about analyzing market and retail data which would help in evolving the process of retailing and help in making better decisions, DataTerms,MarketBasket,DataStorage,DatawithoutUseIs Overhead,Case Studies and Practical Examples of Data-Related Retail Projects, Trade Area Modeling, Real Estate Site Selection Modeling, Competitor Threat Analytics, Merchandise Mix Modeling: Combining Multiple Data Sources, Celebrity Marketing: Tracking Effectiveness, House Brand versus Name Brand, E-Business: Clicks and Mortar, Affinity Merchandising: Merchandise Cross-Sell Case Study, Market Basket Analysis:Examples, Store Departmental Cross-Selling,Single Category Affinity Analysis :Paper Towels.

SECTION B

Importance of Geography and Demographics: Understanding Data Requirements, Science, GIS Layers of Information: Building a Map,How Geography Fits into Retail,Retail Geography:Data, Retail Data:Internal Data Collection, Retail Trade Areas: Differing

Methods for Debate, Zip Code Data: Forecasting ApplicationVolume by Store,What DoWeDo?,Card Preference Opportunity by Zip Code: Case Study, Example of Sales Penetration Map, Market Observations: Additional Uses of the GIS Tool

SECTION C

In-Store Marketing and Presentation: Understanding the Different Store Designs,Theories Merchandise Placement, All about Pricing, Loyalty Discount Philosophies,Tiered Pricing,Types and Sizes:Retail Store Strategies, Store in a Store, What's in a Store: Convenience Stores to Hypermart Stores,Warehouse Clubs: Paying for the Privilege to Shop, Shopping by Design: Traffic Patterns,Category Management:Science behind the Merchandise Mix, Merchandise Placement:Strategy behind the Placement, Specialty Departments: Coffee, Breakfast, and Pizza, In-Store Media:Advertising or Just Displays?, Receipt Messages, In-Store Events, Holidays.

SECTION D

Store Operations and Retail Data & Loyalty Marketing: Setting Up the Store for Success: Strategic Uses of Data, Labor Forecasting, Importance ofAccurate Labor Forecasting: The Cost of Doing Business, Consumer Differentiation at the Point of Sale Register, Heating and Cooling:Centralized Thermostats, Intra store Communication, Replenishment and POS Sales: Cause and Effect, In-Store Career Path: Stockperson to StoreManager, Loyalty Programs,Who Is the Sponsor?,Questions, Are You Loyal?, From the Consumer Finance Credit Card Retail Perspective, Loyalty Segments: Develop Them Early, Loyalty at POS:Different Stages and Levels of Loyalty,The Retail World Is Changing, Social Media.

ReferenceBooks

- Speights, D.B.,Downs,D.M.&Raz,A.(2017),Essentials of Modeling and Analytics:Retail Risk Management and Asset Protection,CRC Press.
- Breeden,J.(2010),Reinventing Retail Lending Analytics: 2nd Impression-Forecasting,Stress Testing,Capital and Scoring for a World of Crises,Incisive Media Investments Ltd.
- Mitchell,P.H.(2013),Discovery-Based Retail:Unlock Your Store's Potential!, Discovery-Based Retail.
- Beckford,M.(2016), The Little Book on Big Data:Understand Retail Analytics Through Use Cases and OptimizeYour Business, Mahogany Beckford.

Course Title/Code	**HR ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The objective of the course is to understand various metrics and data analytics concepts related to HR to make strategic business decisions.The course would establish a framework for applying HR analytics concepts to end to end HR business process for theentirelife-cycleofemployees.

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

SECTION A

Introduction & Practical Examples: The Evolution, Do we know the difference? How to approach analysis? Metrics,dashboards, The strategic value in surveys, Assessing an HR program, Engagement and turnover, Finding the money in analytics,dispeller of myths, linking HR data to operational performance,building your linkage map.

SECTION B

Data Challenges and Building capabilities & Analytical tools: DataChallenges,Should we build the capabilities in-house,Hiring analytical employees,the analytical leader, Data Collection, Analysis tools,Visualization tools.

SECTION C

StrategicWorkforcePlanning: What is strategic workforce planning, its evolution, purpose, how will it help my company,the role of business strategy,determine the roles of interest, establish the current state,determine desired forecasting scenarios, perform gap assessments Benchmarking and best practices,Staffing,supply and demand forecasting**.**

SECTION D

Implementation: Selling the concept, challenges to successful implementation, implementation planning,when selling the concept just didn't work, measuring success, roles and responsibilities,Workforce planning connection to HR activities.

ReferenceBooks

- Edwards,M.& Edwards,K.(2016),Predictive HR Analytics:Mastering the HR Metric,KoganPageLimited.
- Soundarajan,R. & Singh,K.(2016),Winning on HRAnalytics: Leveraging Data for Competitive Advantage,SAGE Publications.
- Bhattacharyya,D.K.(2017),HR Analytics:Understanding Theories and Applications, SAGE Publications.
- BassiL.,Carpenter,R .& McMurrer,D.(2012),HR Analytics Handbook,McBassi & Company.

Course Title/Code	**SOCIAL MEDIA & MEDIA ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The aim of the course is to understand the increasing world connectivity using social network analysis on varied scales which range from small functional groups to the ever expanding world wide web. It examines the creation of various networks be it technological, economic or social and how they affect our behavior and attitudes. The techniques to understand, design and measure various phenomena such as file-sharing websites, social networking sites, recommender systems, search-engines, social bookmarking and virtual worlds are focused.

	Sections	Weightage
Syllabus	A	25%
	B	25%
	C	25%
	D	25%
	TOT AL	100%

SECTION A

Introduction: Introduction:What's different about social network data? Nodes, Relations, Scales of measurement, statistics and social network data. Introduction to formal methods, efficiency, using computers,seeing patterns.Using graph store present social relations: Introduction, graph sand socio grams, kinds of graphs.Working with Net Draw to visualize graphs: Introduction, node attributes, relation properties, location, highlighting parts of the network.

SECTION B

WebAnalytics & Connections: World of web analytics,optimal strategy for choosing web analytics soulmate,Click stream analysis:metrics and practical solutions, Making connections:Link analysis.Random graphs and network evolution. Social contexts:Affiliation and identity. Connection:Search,collapse, robustness Social movements and diffusion of innovation.

SECTION C

Ego Networks, Centrality and Power & Cliques and Subgroups, Positions and Roles: Ego Networks:Introduction, Ego network data,ego network density, structural holes, and brokerage. Centrality, centralization, and power: Introduction, Degree centrality, closeness centrality, between centrality. Embedding:Introduction, Density, Reciprocity,Transitivity, Clustering,Group-external and group-internalties, Krackhardt's graph theoretical dimensions of hierarchy, Cliques and groups:Introduction,Bottom up approaches,top down approaches. Homophily and social segregation.

SECTION D

MeasuresofSimilarityandStructural,AutomorphicandRegularEquivalence: Equivalence: Positions and Social Roles. Introduction, Measuring similarity/dissimilarity,visualizing similarity and distance, describing structural equivalence sets. Automorphic Equivalence: Definition, uses of concept, finding equivalence sets. Regular equivalence: Definition,uses of concept, finding equivalence sets.

ReferenceBooks

- Easley,D.& Kleinberg, J.(2010).Networks,Crowds, and Markets:Reasoning About a Highly Connected World,Cambridge University Press.
- Monge,P.R.& Contractor, N.S.(2003).Theories of communication networks,OxfordUniversity Press,NewYork.
- DuncanJ.W.(2003),Six Degrees:The Science of a Connected Age.NewYork: W.W.Norton and Company.
- Sponder,M.(2014),Social Media Analytics:Effective Tools for Building, Interpreting, and Using Metrics. McGraw.

Course Title/Code	**HEALTHCARE ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The objective is to provide skills and knowledge in healthcare data analytics so that one can be an effective contributor for performance improvement efforts using local data analytics.The course lays down the tools and techniques used for data analytics in healthcare organizations.

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

SECTION A

IntroductiontoHealthcareAnalytics: HealthcareTransformation—Challenges and Opportunities,The Current State of Healthcare Costs and Quality, How Analytics Can Improve Decision Making, Analytics, Quality, and Performance, Applications of Healthcare Analytics, Components of Healthcare Analytics. What Is Quality?,Overview of Healthcare QI, Common QI Frameworks in Healthcare,Working with QI Methodologies

SECTION B

WorkingwithDataandIndicators&BasicStatisticalMethodsandControlChartPrinciples: Data: The Raw Material of Analytics, Preparing Data for Analytics, Getting Started with Analyzing Data, Measures, Metrics, and Indicators, Using Indicators to Guide Healthcare,Improvement Activities, Statistical Methods for Detecting Changes in Quality or Performance, Graphical Methods for Detecting Changes in Quality or Performance.

SECTION C

Leveraging Analytics in Quality Improvement Activities, Usability and Presentation of Information: Moving from Analytics Insight to Healthcare Improvement, Presentation and Visualization of Information, Dashboards for Quality and Performance Improvement, Providing Accessibility to and Ensuring Usability of Analytics Systems.

SECTION D

DevelopinganAnalyticsStrategytoDriveChange&DataQualityandGovernance: Purpose of an Analytics Strategy, Analytics Strategy Framework,with a Focus on Quality/Performance Improvement, Developing an Analytics Strategy, The Need for Effective Data Management, Data Quality, Data Governance and Management, Enterprise- wide Visibility and Opportunity.

ReferenceBooks

Gupta,A.,Patel,V.L.& Greenes,R.A.(2015),Advances in Healthcare Informatics and Analytics,Springer.

MadsenL.B.(2015),Data Driven Healthcare,Wiley.

Burke,J.(2013),Health Analytics:Gaining the Insights to Transform HealthCare,Wiley.

Moriates,C.,Arora,V.,Shah,N.(2015),UnderstandingValue-based Healthcare, McGraw Hill Publication.

Course Title/Code	**OPERATIONS AND SUPPLY CHAIN ANALYTICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	

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

Course Objectives	The aim of the courses is to develop analytical skills for supply-chain in order to address real world problems. The focus will be to familiarize and educate students to strategically manage the issues related to design and management of logistic and operations networks.The benefit of integration of marketing and corporate strategy into logistics and operations is also evaluated.

SECTION A

Introduction: Forecasting for Supply Chain Planning and Management: Introduction to forecasting, samecase studies, time series data, some simple forecasting methods. The forecaster's toolbox:Time series graphics, seasonal or cyclic? Autocorrelation, forecast residuals, white noise, evaluating forecast accuracy. Introduction to Multiple Regression and Stepwise Selection of Predictive Variables, Model Overfitting, the Parsimony Principle and Model Cross-Validation, Selection of Variates in Linear Regression:Forward, Backward and Best Subset Selection, Model Shrinkage Methods and Selection of Variates in Linear Regression: The Lasso,Using Cross- Validation for Model Selection in The Lasso.

SECTION B

DemandForecasting&ARIMAModels: Introduction to Demand Forecasting Simple Exponential Smoothing Model FPP,Holt's Model and Holt-Winters Model FPP, State-Space Approach to Exponential Smoothing, Introduction to ARIMA Models Differencing and Rescaling Time Series, Backshift Notation Non-seasonal ARIMA Models FPP, Seasonal ARIMA Models.

SECTION C

Forecasting Models & Managing Cross-Functional Drivers in SupplyChain: Hierarchical Forecasting Models Top-Down, Bottom-Up, and Middle-Out Approaches to Forecasting, Modeling Interventions:Model Selection and Calibration, Modeling Interventions: Forecasting, Sourcing decisions in a supply chain, pricing and revenue management in supply chain,information technology e-supply chain, coordination e-supply chain.

SECTION D

Aggregate production Planning & Inventory Management   Forecasting: Aggregate Production Planning:Trade offs and Decision Levers,Linear Programming, Demand Shaping, Pricing and Advertising.

ReferenceBooks

- Simchi-Levi,DKaminsky,P.,&Simchi-Levi,E.(2004). Managing the supply chain:the definitive guide for the business professional.McGraw-Hill.
- Chopra, S., &Meindl, P. (2012). Supply Chain Management Strategy, Planning andOperation,PrenticeHall,FifthEdition.
- Mathirajan, M., Rajendran, C., Sadagopan, S., Ravindran, A. &Balasubramanian, P.(2015),Analytics in Operations/Supply Chain Management, I.K.International Publishing.
- Watson,M.,Lewis,S.,Cacioppi,P.&JayaRaman,J.(2012),Supply Chain Network Design,Pearson FTPress,First Edition.

Course Title/Code	**DATA MANAGEMENT AND ETHICS**
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	Theobjectiveofthecourseis to understand what research data is, the need for managing and sharing research data and the lifecycle continuum of research data. The course is also designed to impart the researchers with the knowledge of responsible conduct and research ethics.

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

SECTION A

Introduction to Data Management & Documentation, Organization and Improving Data Analysis: The data problem:What? Why? The data life cycle:The data life cycle and road map,where to start data management?Planning for data management:How to plan for ? Creating a data management plan,data policies, Documentation: Research books and lab notebooks, methods, other useful documentation formats,metadata,standards.Organization:File organization,naming and documenting conventions,databases. Improving data analysis:Raw versus analyzed data,preparing data for analysis, managing your research code. Managing sensitive data: Types, keeping data secure,anonymizing data.

SECTION B

ResearchEthics:AnIntroduction&ResearchMisconduct:Fabricating data,FalsificationandWhistleblowing:
Research Ethics: Best Ethical Practices, Morality vs. ethics, Inauspicious beginnings, How scienceworks.Plagiarize andPerish:Ideas, Sentences, Phrases,What is plagiarism, really? How many consecutive identical and uncited words constitute plagiarism? Self-plagiarism and recycling, Tools to discover plagiarism Research Misconduct: Fabricating Data:Why cheat?,The case of Jan Hendrik Schon,"Plastic Fantastic", The case of Woo-Suk Hwang:dog cloner, data fabricator, Detection of image and data misrepresentation. Research Misconduct: Falsification and Whistle blowing: A"can of worms" indeed: the case of Elizabeth"Betsy" Goodwin,Deal with ethical quandaries ,Cultivating a culture of openness, integrity, and accountability.

SECTION C

AuthorshipandGrantProposals: Authorship:Who's an Author on a Scientific Paper and Why:The importance of the scientific publication, who should be listed as an author? How to avoid author quandaries,Authorship other than research papers, The difference between authorship and inventorship and Other thoughts.GrantProposals:Ethics and Success Intertwined:Why funding is crucial, Path to success in funding, Fair play and collaboration, Record keeping and fiscal responsibility,Pushing the limits on proposals.

SECTION D

PeerReviews,DataEthicsandConflictsofInterest: Peer Review and The Ethics of Privileged Information: History, Nature of journals & purpose of peer review, which papers to review?Grant Proposals,Confidentiality and privileged information, Reviewers. Data and

Data Management: The Ethics & Stewardship of Data,ethics of data at professional meetings, Future of data management.Conflicts of Interest: Dynamic Landscape,Conflictsofinterest.

ReferenceBooks
- Loue,S.(2000),Textbook of Research ethics:Theory and Practice,Springer Link.
- Israel,M.& Hay,I.(2006),Research Ethics for Social Scientists,SAGE Publications.
- Pryor,G.(2012),Managing Research Data,Facet Publishing.
- Shamoo,A.& Resnik,D.B.(2002),Responsible Conduct of Research,Oxford University press,Third Edition.

Course Title/Code	DATA MARKETING ANALYTICS
Course Type:	Hard (DMC)
Course Nature:	Core
L-T-P-O Structure	
Course Objectives	The aim of the course is to aid students in understanding digital marketing methods from the viewpoint of several parties such as analysts, consumers or entrepreneurs and to inculcate the fundamental concepts of digital marketing. The course includes knowledge of various tools of the trade such as social media listening, search analytics, audience analysis and content analysis along with concepts of return on investment.

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

SECTION A

Introduction: Understanding the Digital Media Landscape: Digital Media Types, Paid & Owned Media,Understanding Digital Analytics Concepts: Owned & Earned Social Metrics, Demystifying Web Data, Searching for the Right Metrics, Paid & Organic Searches, Aligning Digital and Traditional Analytics, Primary Research,Traditional Media Monitoring,Traditional CRM Data,The Reporting TimeLine,The Reporting Template.

SECTION B

ToolsoftheTrade:SocialMediaListeningandSearchAnalytics: Tools: Identification, Data Capture, Spam Prevention, Integration with Other Data Sources, Cost, Mobile Capability, API Access, Consistent User Interface,Workflow Functionality, Historical Data, Understanding Social Media Engagement Software, Easy-to-Navigate User Interface, Reliability, Robust Analytics Dashboards, Mobility, CRM Hooks, Social Governance, Monitoring Platform Integration, Social Media Listening Tools: Social Media Listening Evolution, Present Day, Understanding Sysomos, Search Analytics Tools: Basics of Search, Search Analytics Use Cases, Free Tools.

SECTION C

Tools: Audience Analysis and Content Analysis & Digital Influence On Improving Customer Service: Audience Analysis Tools:What Is Audience Analysis? Use Cases, Strategies:Digital Content & Engagement, Search Engine Optimization, Content Optimization, User Experience Design, Audience Segmentation, Audience Analysis Tool Types. Content Analysis Tools: Content

Audit and its Checklist, Real-Time Analytics, Optimizing Content Distribution & Content Consumption, Understanding Digital Influence: Understanding the Reality, "Tipping Point" Phenomenon, Community Rules Phenomenon, Modern-Day Media List, Using the Tools of the Trade, Online Versus Offline Influence, Using the Influencer. Improving Customer Service: Social Customer Service Conflict, Understanding the Customer & Customer Intent, Personalizing Customer Experience, Social Customer Service Models, Stages of Customer Service.

SECTION D

Launching a new product and Formulating Research Plan & Search Analysis and Return on Investment: Launching a New product: Product Life cycle, Introduction Phase,Consumer Reaction, Consumer Concerns, Consumer's Unmet Needs, Growth Phase, Product Life cycle Maturity Phase. Formulating Research Plan: Developing Source List, Data Sources, Analysis Channels, Search and Source Languages, Research Methods, Hypothesis, Analysis Time Frame, Identifying ProjectTeam, Determining Depth of Analysis, Coding Framework, Sentiment Approach , Filtering Spam and Bots, Search Analysis: Search Analytics for Digital Strategy, Content Strategy, Planning and PaidAdvertising. Return on Investment: Defining ROI, Return on Engagement (ROE), Return onInfluence,Return on Experience,Properly Tracking ROI,Understanding theTop-Down Revenue Measurement Approaches,Utilizing Bottom-Up Measurement Models.

ReferenceBooks

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