Master of Business Administration (MBA) – Revised Syllabus 2019

2 year, 4 Semester Full time Programme
Choice Based Credit System (CBCS) and Grading System
Outcome Based Education Pattern

MBA I effective from AY 2019-20
MBA II effective from AY 2020-21

1.0 Preamble: The revised MBA Curriculum 2019 builds on the implementation of the Choice Based Credit System (CBCS) and Grading System initiated in the AY 2013. The curriculum takes the MBA programme to the next level in terms of implementing Outcome Based Education along with the Choice Based Credit System (CBCS) and Grading System.

2.0 Definitions:
2.1 Outcome Based Education:
2.1.1 Outcome Based Education (OBE) Approach: Outcomes are about performance, and this implies:
   a) There must be a performer – the student (learner), not only the teacher
   b) There must be something performable (thus demonstrable or assessable) to perform
   c) The focus is on the performance, not the activity or task to be performed
2.1.2 Programme Educational Objectives (PEOs): Programme Educational Objectives are a set of **broad future-focused student performance outcomes** that explicitly identify what students will be **able to do with what they have learned**, and **what they will be like** after they leave school and are **living full and productive lives**. Thus PEOs are what the programme is preparing graduates for in their **career and professional life** (to attain within a **few years** after graduation[1]).
2.1.3 Graduate Attributes (GAs): Graduate Attributes (GAs) are the **qualities, knowledge and capabilities** that students are encouraged to take responsibility for developing throughout their studies and are the **defining characteristics** of the students passing out of the MBA program**.** These attributes include, but go **beyond, the disciplinary expertise or technical knowledge**.
2.1.4 Programme Outcomes (POs): Programme Outcomes are a set of **narrow statements** that describes what students (learners) **of the programme** are expected to know and be able to perform or attain **by the time of graduation**.
2.1.5 Programme Specific Outcomes (PSOs): Programme Outcomes are a set of **narrow statements** that describes what students (learners) **of a particular specialization of the programme** are expected to know and be able to perform or attain **by the time of graduation**. PSOs are also a function of the various course combinations offered by the Institute.
2.1.6 Learning Outcomes: A learning outcome is what a student CAN DO as a result of a learning experience. It describes a **specific task** that he/she is able to perform at a **given level of competence under a certain situation**. The three broad types of learning outcomes are:
   a) Disciplinary knowledge and skills
   b) Generic skills
   c) Attitudes and values
2.1.7 Course Outcomes (COs): A set of specific statements that describes the **complex performances** a student should be capable of as a result of **learning experiences within a course.**
2.1.8 Teaching and Learning Activities (TLAs): The set of **pedagogical tools and techniques** or the teaching and learning activities that aim to **help students to attain** the intended learning outcomes and engage them in these learning activities through the teaching process.
2.1.9 Outcome Based Assessment (OBA): An assessment system that asks course teachers to first identify what it is that we expect students to be able to do once they have completed a course or program. It then asks course teachers to provide evidence that they are able to do so. In other words, how will each learning outcome be assessed? What **evidence of student learning** is most **relevant for each learning outcome** and **what standard or criteria** will be used to evaluate that evidence? Assessment is therefore a key part of outcome-based education and used to determine whether or not a qualification has been achieved.

2.2 Credit: *In terms of credits, for a period of one semester of 15 weeks:*

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[1] Graduation refers to passing out of the MBA programme. Graduation does NOT refer to 10+2+3/4 degree e.g. BA, BE, etc.

a) *every ONE hour session per week of L amounts to 1 credit per semester*
b) *a minimum of TWO hours per week of T amounts to 1 credit per semester,*
c) *a minimum of TWO hours per week of P amounts to 1 credit per semester,*

Each credit is a combination of 3 components viz. Lecture (L) + Tutorials (T) + Practice (Practical / Project Work / Self Study) (P) i.e. LTP Pattern. Indicative LTP, for each course, is documented in the syllabus.

The course teacher may modify the LTP of the course in view of the course requirements, nature of the course, the level of learners and the type of pedagogy and assessment tools proposed. The modified LTP shall have to be approved by the Director / Head of the Department / Designated academic authority of the Institute.

2.3 **Session:** Each teaching-learning, evaluation session shall be of 60 minutes. However, institutes shall have the flexibility to define their time slots in a manner as to use their faculty and infrastructure resources in the best possible way and ensure effective learning.

2.4 **Course Announcement:** The institute shall announce the elective courses and specializations it proposes to offer the students out of the wider course basket. It is not mandatory to offer all the specializations and all the electives. The decision of the Director shall be final in this case. However, in the spirit of Choice Based Credit System, institutes should offer choices to the students for the elective courses and not offer only the minimum number of electives.

2.5 **Course Registration:** It is mandatory for every student, to register every semester, for the courses opted for that semester. Each student, on admission shall be assigned to a Faculty Advisor who shall advise her/him about the academic programs and counsel on the choice of courses considering the student's profile, career goals and courses taken in the earlier semesters. With the advice and consent of the Faculty Advisor, the student shall register for a set of courses he/she plans to take up for the Semester. Students shall have to register for the courses for the semester within first week of Semester I and immediately after conclusion of the preceding term for subsequent Semesters II, III and IV.

3.0 MBA Programme Focus:

3.1 Programme Educational Objectives (PEOs):
1. **PEO1:** Graduates of the MBA program will *successfully integrate core, cross-functional and inter-disciplinary* aspects of management *theories, models and frameworks* with the *real world practices* and the *sector specific nuances* to *provide solutions to real world business, policy and social issues* in a *dynamic and complex world*.
2. **PEO2:** Graduates of the MBA program will possess excellent *communication skills*, excel in *cross-functional, multi-disciplinary, multi-cultural teams,* and have an appreciation for *local, domestic and global contexts* so as to manage *continuity, change, risk, ambiguity and complexity*.
3. **PEO3:** Graduates of the MBA program will be appreciative of the significance of *Indian ethos and values in managerial decision making* and *exhibit value centered leadership*.
4. **PEO4:** Graduates of the MBA program will be ready to *engage in successful career pursuits* covering a broad spectrum of areas in *corporate, non-profit organizations, public policy, entrepreneurial ventures* and engage in *life-long learning*.
5. **PEO5:** Graduates of the MBA program will be recognized in their chosen fields for their *managerial competence, creativity & innovation, integrity & sensitivity* to local and global issues of social relevance and earn the *trust & respect* of others as *inspiring, effective and ethical leaders, managers, entrepreneurs, intrapreneurs* and change agents.

3.2 Programme Outcomes (POs): At the end of the MBA programme the learner will possess the
1. **Generic and Domain Knowledge -** Ability to articulate, illustrate, analyze, synthesize and apply the knowledge of principles and frameworks of management and allied domains to the solutions of real-world complex business issues
2. **Problem Solving & Innovation** - Ability to Identify, formulate and provide innovative solution frameworks to real world complex business and social problems by systematically applying modern quantitative and qualitative problem solving tools and techniques.

3. **Critical Thinking** - Ability to conduct investigation of multidimensional business problems using research based knowledge and research methods to arrive at data driven decisions

4. **Effective Communication** - Ability to effectively communicate in cross-cultural settings, in technology mediated environments, especially in the business context and with society at large

5. **Leadership and Team Work** - Ability to collaborate in an organizational context and across organizational boundaries and lead themselves and others in the achievement of organizational goals and optimize outcomes for all stakeholders.

6. **Global Orientation and Cross-Cultural Appreciation:** Ability to approach any relevant business issues from a global perspective and exhibit an appreciation of Cross Cultural aspects of business and management.

7. **Entrepreneurship** - Ability to identify entrepreneurial opportunities and leverage managerial & leadership skills for founding, leading & managing startups as well as professionalizing and growing family businesses.

8. **Environment and Sustainability** - Ability to demonstrate knowledge of and need for sustainable development and assess the impact of managerial decisions and business priorities on the societal, economic and environmental aspects.

9. **Social Responsiveness and Ethics** - Ability to exhibit a broad appreciation of the ethical and value underpinnings of managerial choices in a political, cross-cultural, globalized, digitized, socio-economic environment and distinguish between ethical and unethical behaviors & act with integrity.

10. **LifeLong Learning** – Ability to operate independently in new environment, acquire new knowledge and skills and assimilate them into the internalized knowledge and skills.

3.3 Programme Specific Outcomes (PSOs): It is expected that **Institutes define the PSOs** for **each specialization / major-minor combination**. PSOs shall also vary based upon the **customized combination** of Generic Core, Generic Elective, Subject Core, Subject Elective, Foundation, Enrichment & Alternative Study Credit Courses that they offer.

3.4 Graduate Attributes (GAs): At the end of the MBA programme the learner shall exhibit:

GA1: Managerial competence
GA2: Proficiency in Communication, Collaboration, Teamwork and Leadership
GA3: Competence in Creativity & Innovation
GA4: Research Aptitude, Scholarship & Enquiry
GA5: Global Orientation
GA6: Proficiency in ICT & Digital Literacy
GA7: Entrepreneurship & Intrapreneurship Orientation
GA8: Cross-functional & Inter-disciplinary Orientation
GA9: Results Orientation
GA10: Professionalism, Ethical, Values Oriented & Socially Responsible behaviour
GA11: Life-Long Learning Orientation

4.0 MBA Programme Course Types & Evaluation Pattern:

Sr.No.	Course Type	Credits	Nature	Comprehensive Concurrent Evaluation (CCE)	End Semester Evaluation (ESE) Marks	Total Marks
			BASIC COURSE TYPES			
1	Generic Core (GC)	3	Compulsory	50	50	100
2	Subject Core (SC)	3	Compulsory (Specialization specific)	50	50	100
3	Generic Elective (GE - UL)	2	Elective	0	50	50
4	Generic Elective (GE - IL)	2	Elective	50	0	50
5	Subject Elective (SE - IL)	2	Elective (Specialization specific)	50	0	50
6	Summer Internship Project (SIP)	6	Project (Compulsory)	50	50	100
			ADDITIONAL COURSE TYPES			
1	Enrichment Courses (ENR)	1	Elective	25	0	25

2	Foundation Courses (FOU)	1	Elective	25	0	25
3	Alternative Study Credit Courses (ASCC)	2	Elective	50	0	50
4	Open Electives (OE)	3 or 2	Subject Core / Subject Elective	As per Subject Core / Subject Elective Pattern		

4.1 Course Types

4.1.1 **Foundation Course:** These courses focus on developing the basic abilities that support the understanding of other courses.

4.1.2 **Core courses** are the compulsory courses for all the students. Core courses are of two types: Generic Core & Subject Core.

4.1.3 **Generic Core:** This is the course which should compulsorily be studied by a candidate as a core requirement to complete the requirement of a degree in a said discipline of study. Therefore, Generic Core courses are mandatory and fundamental in nature. These courses cannot be substituted by any other courses. Such courses are also known as Hard Core Courses.

4.1.4 **Subject Core:** A Core course may be a Subject Core if there is a choice or an option for the candidate to choose from a broad category (grouping) of subjects (specializations / electives). These are also known as Soft Core Courses.

4.1.5 **Elective Course:** Elective course is a course which can be chosen from a pool of courses. It may be:
   a) Very Specialized or advanced course focusing on a specific aspect
   b) Supportive to the discipline of study
   c) Providing an extended scope
   d) Enabling an exposure to some other discipline/domain
   e) Nurturing candidate's proficiency/skills.

4.1.6 **Generic Elective:** An elective course which is common across disciplines / subjects is called a generic elective. 'Generic Elective' courses develop generic proficiencies amongst the students.

4.1.7 **Generic Elective – University Level**: These elective courses are supportive to the discipline of study and focus on the knowledge aspect of competence building. The course outcomes for such courses can be better assessed through traditional End Semester Evaluation.

4.1.8 **Generic Elective – Institute Level:** These elective courses are aimed to develop inter-personal, technical and other skills aspect of competence building. The course outcomes for such courses can be better assessed through Comprehensive Concurrent Evaluation.

4.1.9 **Subject Elective:** A 'Discipline (specialization) centric' elective is called 'Subject Elective.' Subject Elective courses, in the Semester II, III and IV are focused on a specialization.

4.1.10 **Open Elective:** A subject elective course chosen generally from another Discipline / specialization / subject, with an intention to seek cross-functional exposure is called an Open Elective. A Subject Elective offered in one specialization area may be treated as an Open Elective by another specialization area and vice-a-versa.

4.1.11 **Enrichment Course:** This is a course generally offered to bright learners / fast learners for advanced inputs beyond the curriculum. Enrichment / Add-on Course shall be a 1 Credit Course. The course is of the nature of Course of Independent Study (CIS) and is designed for learners who have the ability and inclination to work independently with limited guidance, supervision and interaction with the faculty member(s).

4.1.12 **Alternative Study Credit Courses:** These courses prepare the learners for a VUCA (Volatile Uncertain, Complex and Ambiguous) world by going beyond the boundaries of their campus. Apart from core and elective courses, these courses engage students in discussion, debate and solution of real world challenges.

4.1.13 **Massive Open Online Courses (MOOCs)[2]**: Massive Open Online Courses (MOOCs) are such online courses which are developed as per the pedagogy stated in the AICTE regulation (2016) or equiavelent; following the four quadrant approach and made available on the SWAYAM platform of Government of India.

4.2 MBA Programme Structure: The Basic Programme Structure shall be as depicted below

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[2] AICTE (Credit Framework for online learning course through SWAYAM) Regulations, 2016

	Course#	Semester I		Semester II		Semester III		Semester IV			Credits	CCE Marks	ESE Mark
		COMPULSORY CORE COURSES (GENERIC (GC) + SUBJECT (SC) + Summer Internship Project SIP)											
A	1	GC - 1	1	GC - 7	1	GC - 11	1	GC - 14		66 Credits		
	2	GC - 2	2	GC - 8	2	GC - 12	2	GC - 15				
	3	GC - 3	3	GC - 9	3	GC -13 (SIP)	3	SC - 5				
	4	GC - 4	4	GC - 10	4	SC - 3	4	SC - 6				
	5	GC - 5	5	SC - 1	5	SC - 4					1050	105
	6	GC- 6	6	SC - 2							2100	
		GENERIC ELECTIVE COURSES (UNIVERSITY LEVEL) – GE - UL											
B	7	GE UL - 1	7	GE UL - 4	6	GE UL – 7	5	GE UL - 10		22 Credits		
	8	GE UL - 2	8	GE UL - 5	7	GE UL – 8	6	GE UL - 11			0	55
	9	GE UL - 3	9	GE UL - 6	8	GE UL – 9					550	
		GENERIC / SUBJECT ELECTIVE COURSES (INSTITUTE LEVEL) - GE – IL / SE - IL											
C	10	GE IL - 1	10	GE IL - 4	9	SE IL -3	7	SE IL -6		22 Credits		
	11	GE IL - 2	11	SE IL -1	10	SE IL -4	8	SE IL -7			550	
	12	GE IL - 3	12	SE IL -2	11	SE IL -5					550	
											110 Credits	1600 CCE	1600 ESE
	12		12		11		8		43			

	FOUNDATION COURSES (OPTIONAL)					
D	FOUNDATION 1 FOUNDATION 2 FOUNDATION 3 FOUNDATION 4 FOUNDATION 5 FOUNDATION 6	FOUNDATION 7 FOUNDATION 8 FOUNDATION 9 FOUNDATION 10				0 to 10 Credits

	ENRICHMENT COURSES (OPTIONAL)				
E	ENRICHMENT 1 ENRICHMENT 2 ENRICHMENT 3 ENRICHMENT 4 ENRICHMENT 5 ENRICHMENT 6	ENRICHMENT 7 ENRICHMENT 8 ENRICHMENT 9 ENRICHMENT 10	ENRICHMENT 11 ENRICHMENT 12	ENRICHMENT 13 ENRICHMENT 14	0 to 14 Credits

	ALTERNATIVE STUDY CREDIT COURSES (OPTIONAL)				
F	ASCC 1 ASCC 2 ASCC 3	ASCC 4 ASCC 5 ASCC 6	ASCC 7 ASCC 8 ASCC 9	ASCC 10 ASCC 11	0 to 22 Credits

Note:
1. The basic programme structure comprises of Block A, B & C above.
2. Variations to the basic programme structure shall be defined at the institute level using any permissible combination of A,B,C,D,E and F blocks depicted above, taking into consideration institutional vision-mission-focus areas, industry demand, student learning capabilities, faculty competencies, availability of learning resources, etc. PSOs shall be appropriately defined by the institute.

LEGEND:

#	Block	CIE - ESE (Credits per course)	Course Type	Credits	Courses	Nature
1.1	A1	50-50 (3 Credits)	GENERIC CORE (GC)	42	14	COMPULSORY
1.2	A2	50-50 (3 Credits)	SUBJECT CORE (SC)	18	6	COMPULSORY
1.3	A3	50-50 (6 Credits)	PROJECT	6	1	COMPULSORY
2	B	0 - 50 (2 Credits)	GENERIC ELECTIVE (UNIVERSITY LEVEL) GE – UL	22	11	ELECTIVES
3.1	C1	50-0 (2 Credits)	GENERIC ELECTIVE (INSTITUTE LEVEL) GE – IL	8	4	ELECTIVES
3.4	C2	50-0 (2 Credits)	SUBJECT ELECTIVE (INSTITUTE LEVEL) SE - IL	14	7	ELECTIVES
			TOTAL	**110**	**43**	
OPTIONAL COURSES (In Lieu of C1 / C2 ONLY)						
4.1	D	25 - 0 (1 Credit)	FOUNDATION COURSES	0 -10	0 - 10	ELECTIVES
4.2	E	25 - 0 (1 Credit)	ENRICHMENT COURSES	0- 14	0 - 14	ELECTIVES
4.3	F	50 - 0 (2 Credits)	ALTERNATIVE STUDY CREDIT COURSES	0 -22	0 -11	ELECTIVES

5.0 Specializations offered: The following specializations shall be offered as MAJOR / MINOR:
1. Marketing Management (MKT)
2. Financial Management (FIN)
3. Human Resources Management (HRM)
4. Operations & Supply Chain Management (OSCM)
5. Business Analytics (BA)

The following specializations shall be offered ONLY as MINOR Specializations:
1. Rural & Agribusiness Management (RABM)
2. Pharma & Healthcare Management (PHM)
3. Tourism & Hospitality Management (THM)
4. International Business Management (IB)

Note:
1. Institutes may offer ONLY SELECT specializations based on industry needs, faculty strength & competencies, student demands, employability potential, etc.
2. Institutes MAY NOT offer a specialization if a **minimum of 20% of students** are not registered for that specialization.

3. The Institute MAY NOT offer an elective course if a **minimum of 20% of students** are not registered for that elective course.

5.1 Open Elective(s):
1. Learners who intend to learn specific courses from other specialization(s) can opt for Subject Elective (SE - IL) courses from other specializations in lieu of the Subject Elective (SE - IL) courses from their native specialization.
2. These open electives MAY BE from two different specializations.
3. Open Electives can be opted for only in Sem III and Sem IV.
4. Students can opt for maximum 1 Subject Elective (SE - IL) course in Sem III and Sem IV each. i.e. Students can opt for maximum 2 Open Electives (total 4 credits).

5.2 Major Specialization + Minor Specialization Combination:
1. For a **Major + Minor Specialization combination** the learner shall **complete**
   a) Major Specialization – Courses: Total 9 (4 Subject Core courses and 5 Subject Elective courses)
   b) Minor Specialization – Courses: Total 4 (2 Subject Core courses and 2 Subject Elective courses)
2. For a **Major + Minor Specialization combination** the learner shall **earn**
   a) Major Specialization – Credits: Total 22 (12 Credits from Subject Core + Minimum 10 Credits from Subject Electives)
   b) Minor Specialization – Credits: Total 10 (6 Credits from Subject Core + Minimum 4 Credits from Subject Electives)
3. The 10 credits of the MINOR specialization shall be from a single specialization, out of which 6 credits shall be mandatorily earned through the Subject Core Courses.
4. The Major + Minor specialization combination is OPTIONAL.
5. Students shall be permitted to opt for **ANY Major + ANY Minor** specialization combination, subject to institutional norms and guidelines, issued from time to time.
6. A student opting for Major + Minor specialization combination shall opt for Foundation Courses / Enrichment Courses / Alternative Study Credit Courses **ONLY in lieu of Generic Elective (GE - IL) Courses**.
7. Institutes may stipulate additional criteria of minimum SGPA / CGPA, number of backlogs, expectations about specific graduation discipline for students who wish to take up a specific specialization / specific major minor combination. Such criteria may also involve the potential employability criteria for a particular specialization / Major + Minor specialization combination.

5.3 Options & Guidelines for Choice of Specialization:
1. Students can opt for a single specialization (i.e. Major Only – 5 choices)
2. Students can opt for a two specializations (i.e. Major + Minor Combination – 1(Major) + 8(Minor) choices)
3. Specializations which are offered ONLY as MINOR shall be offered in SECOND YEAR ONLY. (4 choices)
4. Courses for the Minor specialization shall be taken up in the second year ONLY (in either Sem III or Sem IV or in a combination of Sem III and IV).
5. The Major specialization of a student shall be determined by the Subject Core (SC) courses and the Subject Elective (SE - IL) courses chosen in Sem II.
6. All courses (Subject Core (SC) courses and the Subject Elective (SE - IL) courses) chosen in Sem II shall belong to the same specialization.
7. The learners shall generally complete 6 Subject Core courses (2 each in semester II, III, IV) and 7 Subject Elective courses (2, 3, 2 each in semester II, III, IV respectively). In this case he /she shall be awarded MBA (Functional Area Specialization) degree, e.g. MBA (Marketing), MBA (Finance), etc.
8. The learners shall complete 4 Subject Core courses and 5 Subject Elective courses of Major specialization and 2 Subject Core courses and 2 Subject Elective courses of Minor specialization. In this case he /she shall be awarded MBA (Functional Area Specialization Major + Functional Area Specialization Minor) degree, e.g. MBA (Marketing + Finance), etc.

5.4 Foundation Courses:
1. All the Foundation Courses shall be of 1 credit each.
2. Maximum credits for Foundation Courses **shall not exceed 10 (Ten) Credits**.

3. Foundation Courses can be opted for ONLY IN LIEU of Generic Elective (GE - IL) and / or Subject Elective (SE - IL) courses.[3]
4. This choice can be exercised in Semester I (minimum zero Credits – maximum six credits) or Semester II (minimum zero Credits – maximum four credits) ONLY.
5. Foundation Courses CANNOT be opted for in Sem III and in Sem IV.
6. It is NOT MANDATORY for a learner to opt for Foundation Courses. However, Faculty members may advise a student to enroll for Foundation Course(s) after a methodical assessment of the relevant competencies of the student.
7. Foundation Courses shall be offered ONLY to those students who lack the basic competencies in the specific course. The institute shall conduct a methodical assessment of the relevant competencies of the student. to identify the learners who need to take up foundation courses. Records of the evaluation shall be preserved.
8. Institutes may stipulate additional criteria for students desirous to take up Foundation Courses.
9. Foundation Courses shall be taught by the course teacher in workshop mode / project mode.
10. The course teacher shall oversee the progress of the learner as well as evaluate the learner for 25 marks / 1 credit.
11. Pre- and post-test: A test or other assessment activity shall be administered to the students both at the beginning of the foundation course and at the end of the foundation course, with the intention of demonstrating improved skills upon completion. The tests shall be essentially SKILL based.
12. Best of the two assessments shall be treated as the final evaluation.
13. The list of Foundation Courses is mentioned in Annexure I.

5.5 Enrichment Courses:
1. All the Enrichment Courses shall be of 1 credit each.
2. Maximum credits for Enrichment Courses **shall not exceed 14 (Fourteen) Credits**.
3. Enrichment Courses can be opted for, ONLY IN LIEU of Generic Elective (GE - IL) and / or Subject Elective (SE - IL) courses[4].
4. This choice can be exercised in Semester I (minimum zero Credits – maximum six credits) or Semester II (minimum zero Credits – maximum four credits) or Semester III (minimum zero Credits – maximum two credits) or Semester IV (minimum zero Credits – maximum two credits).
5. It is NOT MANDATORY for a learner to opt for Enrichment Courses. However, Faculty members may advise a student to enroll for Enrichment Course(s) after a methodical assessment of the relevant competencies of the student.
6. Institutes may stipulate additional criteria for students desirous to take up Enrichment Courses.
7. Enrichment Courses shall be executed as **Course of Independent Study** (CIS) in guided self study mode.
8. A faculty guide shall be assigned for such courses. The learner shall select the Enrichment Course that he/she desires to opt for and submit an outline of the proposed study relevant to the course. The faculty guide shall approve the proposal after considering the nature of the work, learning effort required, desired outcomes and comprehensive coverage of the topic.
9. Since enrichment course is a guided self study course, 40 - 45 hours of work shall be equivalent to one credit. The faculty shall oversee the progress of the learner as well as evaluate the learner for 25 marks / 1 credit.
10. The learners shall document and submit details such as questionnaires, interview schedules, interview transcripts, observation sheets, photographs, testimonials from the organizations / persons interacted with, permission letters, acceptance letters, field work sampling plans, etc.
11. Enrichment Courses can be carried out in the campus library / in the campus IT lab / in a local community setting / in a start-up / in a government undertaking / in a NGO / in a cooperative / in a corporate entity.
12. The Enrichment Courses are organized in different Proficiency Tracks. Learners shall normally opt for enrichment courses from **NOT MORE THAN 3 Proficiency Tracks**.
13. **Enrichment Courses are of the following types:**
a) **Seminar** - Involves Desk Research of distributed learning material and information resources and submission and presentation of an analytical report. Maximum credits for Enrichment Courses of Seminar type shall not exceed 10 (Ten) Credits.

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[3] Except for a learner who opts for Major + Minor Specialization combination

[4] Except for a learner who opts for Major + Minor Specialization combination

b) **Review** – Involves Desk Research of a small set of specific published reports/ databases and submission and presentation of an analytical report. Maximum credits for **Enrichment Courses of Seminar type** shall not exceed 10 (Ten) Credits.

c) **Case Study Development and Presentation** – Involves desk research and field work leading to the development, presenting and publishing of a case study. Maximum credits for **Enrichment Courses of Case Study Development and Presentation type** shall not exceed 10 (Ten) Credits.

d) **Project** – Involves field work leading to presentation of a comprehensive report based on the experiential learning. Maximum credits for **Enrichment Courses of Project type** shall not exceed 10 (Ten) Credits.

e) **Lab / Workshop** - Involves experiential learning through focused skill building activity. Maximum credits for **Enrichment Courses of Lab / Workshop type** shall not exceed 10 (Ten) Credits.

f) **Clinic / Fest** – Involves experiential learning through organizing an event / campaign. Maximum credits for **Enrichment Courses of Clinic / Fest type** shall not exceed 4 (Four) Credits.

g) **Personal Interest Course** - Involves experiential learning through club activities at the Institute Level. Maximum credits for **Enrichment Courses of Personal Interest Course type** shall not exceed 4 (Four) Credits.

14. A well documented and comprehensive spiral bound report / publication, with appropriate referencing, is essential for all the enrichment courses. Relevant Audio, Video Material, should be included as a part of the report.

15. The Evaluation for the Enrichment Courses shall be as follows –
    a) Proposal and Scope of Work – 5 Marks
    b) Report – 10 Marks
    c) Presentation – 5 Marks
    d) Viva Voce – 5 Marks

16. The presentation shall be similar to an open defence. The Viva Voce shall be carried out by minimum two faculty members including the guide.

17. The sum total of the number of Foundation Courses and the number of Enrichment Courses opted by a student in a particular semester should generally be an even number.

18. The list of Enrichment Courses is provided in Annexure I.

5.6 Alternative Study Credit Courses:

1. All the ASCC shall be of 2 credits each.
2. Maximum credits for ASCC **shall not exceed 22 (Twenty two) Credits**.
3. Alternative Study Credit Courses (ASCC) can be opted for, ONLY IN LIEU of Generic Elective (GE - IL) and / or Subject Elective (SE - IL) courses[5].
4. This choice can be exercised in Semester I (minimum zero Credits – maximum six credits) or Semester II (minimum zero Credits – maximum six credits) or Semester III (minimum zero Credits – maximum six credits) or Semester IV (minimum zero Credits – maximum four credits). i.e. a learner may skip Generic Elective (GE - IL) courses all together and earn the required 22 credits entirely through ASCC.
5. It is NOT MANDATORY for a learner to opt for Alternative Study Credit Courses. However, Faculty members may advise a student to enroll for Alternative Study Credit Course(s) after a methodical assessment of the relevant competencies of the student.
6. Institutes may stipulate additional criteria for students desirous to take up Alternative Study Credit Courses.
7. **A MINIMUM of 60% of the total credits earned by a learner through ASCC shall either be from MOOCs or from Professional Certification Programmes**.
8. Thus a learner may skip all Generic Elective (GE - IL) courses and skip all Subject Elective (SE - IL) courses and earn the required 22 credits entirely through ASCC.
9. The same TYPE of ASCC can be opted for multiple number of times. Norms for the same are prescribed in the relevant section later in this syllabus document. For e.g. A student may undertake 11 "Professional Certification Programs" and earn 22 credits or complete 11 MOOCS and earn 22 Credits. 4 WEEKS MOOC shall be treated as 1 credit , 8 WEEKS MOOC shall be treated as 2 credits & 12 WEEKS MOOC shall be treated as 3 credits.
10. ASCC shall be executed in online study mode / field work or project mode / certification mode.
11. A faculty guide shall be assigned for such courses. The faculty shall oversee the progress of the learner as well as evaluate the learner for 50 marks / 2 credits.

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[5] Except for a learner who opts for Major + Minor Specialization combination

12. The learner shall select the ASCC that he/she desires to opt for and submit an outline of the proposed study relevant to the course. The faculty guide shall approve the proposal after considering the nature of the work, learning effort required, desired outcomes and comprehensive coverage of the topic.

13. There is no defined syllabus for the ASCC courses. Institutes shall define the syllabus and announce the same on the website.

14. Since ASCC is a guided self study course 40 - 45 hours of work shall be equivalent to one credit. The faculty shall oversee the progress of the learner as well as evaluate the learner for 50 marks / 2 credits.

15. The start date of the ASCC such as Professional Certifications shall be after the admission date for the MBA programme and the end date of the ASCC shall be within 6 months of the start date of the ASCC, but before the completion of Sem IV.

16. The list of ASCC is provided in Annexure I.

5.7 Combination of Options: A learner may opt for any combination of earning the 22 credits assigned to Generic Elective (GE - IL) courses and Subject Elective (SE - IL) courses through

      e) Generic Elective (GE - IL) courses
      f) Subject Elective (SE - IL) courses
      g) Open Elective Courses
      h) Major + Minor specialization combination
      i) Foundation Courses
      j) Enrichment Courses
      k) Alternative Study Credit Courses

SUBJECT TO THE minimum and maximum limits of credits prescribed and, subject to institutional norms and guidelines, issued from time to time.

6.0 Summer Internship Project: At the end of Second Semester each student shall undertake a Summer Internship Project (SIP) for a **minimum of 8 weeks**. For SIP, 1 credit is equivalent to minimum 40-45 hours of effective work. SIP shall have 6 credits. It is mandatory for the student to seek advance written approval from the faculty guide and the Director of the Institute about the topic and organization before commencing the SIP.

The SIP may or may not have a Functional Focus, i.e. the student may take up a SIP in his/her intended area of specialization or in any other functional area of management. **Ideally the SIP should exhibit a cross-functional orientation.** SIP can be carried out in a Corporate Entity / NGO / SME / Government Undertaking / Cooperative Sector. SIP may be a research project – based on primary / secondary data or may be an operational assignment involving working by the student on a given task/assignment/project/ etc. in an organization / industry. It is expected that the SIP shall sensitize the students to the demands of the workplace.

Each student shall maintain a SIP Progress Diary detailing the work carried out and the progress achieved on a daily basis. The student shall submit a written structured SIP report based on work done during this period. The student shall submit the SIP Progress Diary along with the SIP Report.

Students shall also seek a formal evaluation of their SIP from the company guide. **The** formal evaluation by the company guide shall comment on the nature and quantum of work undertaken by the student, the effectiveness and overall professionalism. The learning outcomes of the SIP and utility of the SIP to the host organization must be specifically highlighted in the formal evaluation by the company guide. The SIP evaluation sheet duly signed and stamped by the industry guide shall be included in the final SIP report.

The SIP report must reflect 8 weeks of work and justify the same. The SIP report should be well documented and supported by –

1. Institute's Certificate
2. Certificate by the Company
3. Formal feedback from the company guide
4. Executive Summary
5. Organization profile
6. Outline of the problem/task undertaken
7. Research methodology & data analysis (in case of research projects only)

8. Relevant activity charts, tables, graphs, diagrams, AV material, etc.
9. Learning of the student through the project
10. Contribution to the host organization
11. References in appropriate referencing styles. (APA, MLA, Harvard, Chicago Style etc.)

The completion of the SIP shall be certified by the respective Faculty Guide & approved by the Director of the Institute. The external organization (Corporate / NGO/ SME/ Government Entity/ Cooperative/ etc.) shall also certify the SIP work.

The students shall submit a spiral bound copy of the SIP report by 15th September. The Institute shall conduct an internal viva-voce for evaluation of the SIP for 50 marks between 15th September to 30th September. The Panel shall comprise of two evaluators appointed by the Director of the Institute / Head of Department (for MBA departments in engineering colleges). Institutes are encouraged to involve senior alumni, industry experts, recruiters to conduct the internal viva-voce. The internal viva-voce panel shall provide a detailed assessment of the SIP report and suggest changes required, if any.

After the internal viva-voce, the student shall finalize the SIP report by incorporating all the suggestions and recommendations of the internal viva-voce panel. The internal guide shall then issue the Institute's Certificate to the student.

The student shall submit TWO hard copies & one soft copy (CD) of the project report before 30th October in Sem III. One hard copy of the SIP report is to be returned to the student by the Institute after the External Viva-Voce. In the interest of environmental considerations, students are encouraged to print their project reports on both faces of the paper. Spiral bound copies may be accepted.

There shall be an external viva-voce for the SIP for 50 marks. The external viva-voce shall be conducted after the theory exam of Semester III.

The Internal & the External viva-voce shall evaluate the SIP based on:
1. Adequacy of work undertaken by the student
2. Application of concepts learned in Sem I and II
3. Understanding of the organization and business environment
4. Analytical capabilities
5. Technical Writing & Documentation Skills
6. Outcome of the project – sense of purpose
7. Utility of the project to the organization
8. Variety and relevance of learning experience

Copies of SIP report and records of evaluation shall be maintained by the Institute for a period of 3 academic years.

7.0 Comprehensive Concurrent Evaluation (CCE) / Concurrent Internal Evaluation (CIE):
1. The course teacher shall prepare the scheme of Comprehensive Concurrent Evaluation (Formative Assessment) before commencement of the term. The scheme of Comprehensive Concurrent Evaluation shall explicitly state the linkages of each CCE with the Course Outcomes and define the targeted attainment levels for each CO.
2. The Director / Head of the Department / designated academic authority shall approve the scheme of Comprehensive Concurrent Evaluation with or without modifications.
3. The course teacher shall display, on the notice board, the approved CCE scheme of the course and the same shall also be hosted on the website, not later than the first week of the term.
4. Each CCE item shall be of minimum 25 marks.
5. For a 3 Credit Course there shall be a MINIMUM of three CCE items. The final scores shall be converted to 50, using an average or best two out of three formula.
6. For 2 Credit Course there shall be a MINIMUM of two CCE items. The final scores shall be converted to 50.
7. For a 1 Credit Course there shall be a MINIMUM of one CCE item.
8. CCE shall be spread through the duration of course and shall be conceptualized, executed, assessed and documented by the course teacher along with student-wise and class-wise attainment levels of the COs and the attainment levels of the course.

9. The assessment outcome of each CCE shall be duly signed by the course teacher, programme coordinator / academic head and the Director / Head of the Department / designated academic authority of the Institute.
10. A copy of the duly signed CCE *outcome* shall be displayed on the notice boards, within a week of the assessment and course teachers shall guide the students on a need basis.
11. Institute may conduct additional make up / remedial CCE items at its discretion.
12. At the end of the term aggregate CCE scores / grades shall be calculated and the CO attainment levels shall be calculated by the course teacher. The same shall be displayed on the notice board

7.1 Comprehensive Concurrent Evaluation Methods: Course teachers shall opt for a combination of one of more CCE methods listed below.

Group A (Individual Assessment) – Not more than 1 per course
1. Class Test
2. Open Book Test
3. Written Home Assignment
4. In-depth Viva-Voce

Group B (Individual Assessment) – Atleast 1 per course
5. Case Study
6. Caselet
7. Situation Analysis
8. Presentations

Group C (Group Assessment) – Not more than 1 per course
9. Field Visit / Study tour and report of the same
10. Small Group Project & Internal Viva-Voce
11. Model Development
12. Role Play
13. Story Telling
14. Fish Bowls

Group D (Creative - Individual Assessment) – Not more than 1 per course
15. Learning Diary
16. Scrap Book / Story of the week / Story of the month
17. Creating a Quiz
18. Designing comic strips
19. Creating Brochures / Bumper Stickers / Fliers
20. Creating Crossword Puzzles
21. Creating and Presenting Posters
22. Writing an Advice Column
23. Library Magazines based assessment
24. Peer assessment
25. Autobiography/Biography
26. Writing a Memo
27. Work Portfolio

Group E (Use of Literature / Research Publications- Individual Assessment) – Not more than 1 per course
28. Book Review
29. Drafting a Policy Brief
30. Drafting an Executive Summary
31. Literature Review
32. Term Paper
33. Thematic Presentation
34. Publishing a Research Paper
35. Annotated Bibliography

36. Creating Taxanomy
37. Creating Concept maps

Group F (Use of Technology - Individual Assessment) – Not more than 1 per course
38. Online Exam
39. Simulation Exercises
40. Gamification Exercises
41. Presentation based on Google Alerts
42. Webinar based assessment
43. Creating Webpage / Website / Blog
44. Creating infographics / infomercial
45. Creating podcasts / Newscast
46. Discussion Boards

Rubrics: The course teacher shall design Rubrics for each CCE. Rubrics are scoring tools that define performance expectations for learners. The course teacher shall seek approval for the rubrics from the Director / Head of the Department / other designated competent academic authority of the institute. The course teacher shall share the approved Rubrics with the students at the start of the course. The rubric shall detail the following:
1. Linkages of the CCE to COs.
2. A description of the assessment - brief concept note
3. Criteria that will be assessed - the expected learning outcomes.
4. Descriptions of what is expected for each assessment component - the expectations from the student.
5. Substantive description of the expected performance levels indicating mastering of various components - the assessment criteria.
6. The team composition, if applicable.
7. The format and mode of submission, submission timelines
8. Any other relevant details.

7.3 Safeguards for Credibility of CCE: The following practices are encouraged to enhance transparency and authenticity of concurrent evaluation:
1. Involving faculty members from other management institutes.
2. Setting multiple question paper sets and choosing the final question paper in a random manner.
3. One of the internal faculty members (other than the course teacher) acting as jury during activity based evaluations.
4. Involvement of Industry personnel in evaluating projects / field based assignments.
5. Involvement of alumni in evaluating presentations, role plays, etc.
6. 100% moderation of answer sheets, in exceptional cases.

7.4 Retention of CCE Documents: Records of CCE shall be retained for 3 years from the completion of the Academic Year. i.e. **Current Academic Year (CAY) + 3 years.** Likewise records of assessments to decide the learning needs of students for opting for **Foundation Courses / capabilities for Enrichment Courses/ ASCC/ start-up option** etc. shall be retained for 3 years from the completion of the Academic Year.

8.0 End Semester Evaluation (ESE):
1. The End Semester Evaluation (Summative Evaluation) for the Generic Core (GC), Subject Core (SC) and the Generic Elective (GE - UL) course shall be conducted by the Savitribai Phule Pune University.
2. The ESE shall have 5 questions each of 10 marks.
3. All questions shall be compulsory with internal choice within the questions.
4. The broad structure of the ESE question paper shall be as follows:

Question Number	COGNITIVE ABILITIES EVALUATED	Nature
Q.1	REMEMBERING	Answer any 5 out of 8 (2 marks each)
Q.2	UNDERSTANDING	Answer any 2 out of 3 (5 marks each)
Q.3	APPLYING	Answer 3 (a) or 3 (b) (10 marks)

Q.4	ANALYSING	Answer 4 (a) or 4 (b) (10 marks)
Q.5	EVALUATING	Answer 5 (a) or 5 (b) (10 marks)
	CREATING	

9.0 Programme Flexibility:

9.1 Average Credits per semester, Fast & Slow Learners:
1. It is expected that a student registers for 30 credits in Semester I, II, III each and balance 20 credits in Semester IV.
2. **Fast learners** (under accelerated plan), may be permitted to register for upto 6 additional credits per semester, subject to fulfilling the pre-requisites defined for a course, if any. However the degree shall be awarded not earlier than the end of the 2 academic years since the first admission to the MBA programme.
3. **Slow learners,** may be permitted to register for less than the normal credits defined for a semester but shall have to complete the programme within the stipulated maximum duration of 4 academic years since the first admission to the MBA programme.

9.2 Dropping an Elective Course:
1. Students who opt for an elective course and fail to earn the credits for the elective course (generic / subject / open) are permitted to opt for another elective course (generic / subject / open) in case they feel to do so.
2. In such a case they shall be said to have dropped the original course and opted for a new one.
3. Generic Core (GC), Subject Core (SC) CANNOT be dropped.
4. Generic Elective (GE - UL), Generic Elective (GE - IL) & Subject Elective (SE - IL) can be dropped and replaced with equivalent alternative courses
5. Not more than four courses can be dropped and replaced with equivalent alternative courses during the entire MBA programme.

9.3 Horizontal or Lateral Credit Transfer:
1. When a learner successfully completes the courses included in an academic program at a certain level, he/she is allowed to transfer his/her credits in some of these courses to another same-level academic program having these courses in common. This is referred to as 'Horizontal or Lateral Credit Transfer'.
2. Horizontal or Lateral Credit Transfer shall be permitted **between the MBA and the MCA programme of SPPU** for the equivalent number of credits provided the courses are related to the MBA programme's PEOs and POs and are opted by the students during the period of his enrolment for the MBA programme.
3. The list of such courses eligible for Horizontal or Lateral Credit Transfer **between the MBA and the MCA programme of SPPU** shall be announced by the BOS/Faculty.
4. The upper limit for Horizontal or Lateral Credit Transfer shall be 6 credits.
5. Such transfer shall be permitted for Generic Elective (GE - IL) & Subject Elective (SE - IL) only.

9.4 Block Credit Transfer:
1. Block credit transfer refers to a group of courses, such as a completed certificate or diploma program that are accepted for transfer of credit into a degree program.
2. Block credit transfer shall be permitted for all **national and international professional certifications** achieved by the learner provided the **courses learning outcomes (CLOs)** are related to the **MBA programme's PEOs and POs** and are opted by the students **during the period of his enrolment for the MBA programme**. The institute shall verify the linkages between the CLOs and the MBA PEOs and POs.
3. Such transfer shall be permitted for Generic Elective (GE - IL) & Subject Elective (SE - IL) courses ONLY.

9.5 Credit Transfer for MOOCs:
1. Learners are encouraged to opt for MOOCs (Massive Online Open Courses) through **SWAYAM, NPTEL, EdX, Coursera, Udemy** as a part of ASCC.
2. Priority shall be given to the SWAYAM platform. If a course is not available of SWAYAM, other online platforms may be used.
3. Not more than 20% of the total credits (22 Credits) shall be earned through the MOOCs.
4. Not more than 20% of the credits per semester (6 credits) per semester shall be earned through the MOOCs.

5. Since MOOC is a guided self study course 40 - 45 hours of work shall be equivalent to one credit. The faculty shall oversee the progress of the learner as well as evaluate the learner for 50 marks / 2 credits.

6. Students shall apply to the Director / Head of the Department / other designated competent academic authority of the institute in advance and seek permission for seeking credit transfer for the proposed MOOCs, he/she wishes to pursue.

7. Online courses of SWAYAM or equivalent platform shall be allowed if:
   a) There is non-availability of suitable teaching staff for running a course in the Institution or
   b) The facilities for offering the elective papers (courses), sought for by the students are not on offer in the Institution, but are available on the SWAYAM or equivalent platform.

8. Evaluation of MOOCS through SWAYAM:

8.1 In case of SWAYAM, the students shall be evaluated as a part of the MOOC itself by the host institution (i.e. institution who has launched the MOOC through SWAYAM).

8.2 The evaluation should be based on predefined norms and parameter and shall be based on a concurrent comprehensive evaluation throughout the length and breadth of course based on specified instruments like discussions, forms, quizzes, assignments, sessional examinations and final examination.

8.3 After conduct of the examination and completion of the evaluation, the host institution shall award marks/grade as per the evaluation scheme announced and communicate the marks/grade to the students as well the parent institution of the student, within 4 weeks from the date of completion of the final examination.

8.4 The parent institution shall, incorporate the marks/grade obtained by the student, as communicated by the Host Institution of the SWAYAM course in the marks sheet of the student that counts for final award of the degree/diploma by the University with the proviso that the programs in which Lab/Practical Component is involved, the parent institution will evaluate the students for the practical/Lab component and accordingly incorporate these marks/grade in the overall marks/grade.

8.5 A certificate regarding successful completion of the MOOCs course shall be signed by the PI and issued through the Host Institution and sent to the Parent Institution.

9. Evaluation of MOOCS through EdX, Coursera, Udemy:

9.1 The concurrent comprehensive evaluation conducted by EdX, Coursera, Udemy may be adopted by the institute and the institute may accordingly incorporate these marks/grade in the overall marks/grade for the course.

9.2 Alternatively, the institute may carry out a concurrent comprehensive evaluation of such students who undertake MOOCs through the EdX, Coursera, Udemy platform.

9.6 Professional Certification Programmes:

1. Learners may opt for Professional Certification Programmes as a part of ASCC. These Professional Certification Programmes shall be offered by National, International organizations, Apex bodies, Chambers of Commerce, Professional certifying bodies, E-learning companies of repute.

2. Not more than 20% of the total credits (22 Credits) shall be earned through the Professional Certification Programmes.

3. Not more than 20% of the credits per semester (6 credits) per semester shall be earned through the Professional Certification Programmes.

4. Students shall apply to the Director / Head of the Department / other designated competent academic authority of the institute in advance and seek permission for seeking credit transfer for the proposed Professional Certification Programmes, he/she wishes to pursue.

5. For Professional Certification Programmes, 40 - 45 hours of work shall be equivalent to one credit. The faculty shall oversee the progress of the learner as well as evaluate the learner for 50 marks / 2 credits.

6. A valid certificate regarding successful completion of the Professional Certification Programmes shall be submitted by the learner to the institute for claiming the 2 credits.

7. Indicative list is provided below -
   i.   Business English Certificate (Cambridge) / IELTS / TOEFL Certification
   ii. Foreign Language Certification Equivalent to A1/A2 or above
   iii. Google / MicroSoft / Oracle / Sun Certification
   iv. NSE / BSE / NISM Certification
   v.   SAP Financial Accounting (FI) / Controlling (CO) / Sales and Distribution (SD) / Production Planning (PP) / Materials Management (MM) / Quality Management (QM) / Human Capital Management (HCM) / CRM Certification

     vi.   Six Sigma Certification
    vii.   ISO Certification (as an auditor)
  viii.   Tally ERP Certification
     ix.   NLP Certification

9.7 Start-up: Launching and Sustaining' program[6]: AICTE has launched the 'Start-up: Launching and Sustaining' program to promote entrepreneurship.

Learners opting for the 'Start-up: Launching and Sustaining' program shall earn the credits for the Generic Core (GC), Subject Core (SC) & Generic Elective (GE - UL); with the minimum desired CGPA.

However, these learners shall skip the Generic Elective (GE - IL) & Subject Elective (SE - IL) courses and instead opt for the Milestone based concurrent comprehensive evaluation for 'Start-up: Launching and Sustaining' Programme as per the AICTE Policy laid down in this regard.

Such students shall have to fulfill two out of the five measurable outcomes as below:
    a) **Funding:** Student Start-up should acquire at least 1-5 Lakhs INR of start-up funding as capital/convertible equity or other similar equity instruments used in start-up investments.
    b) **Employment Created:** At least 5 additional jobs, (other than student founders) with a minimum of 15,000 CTC/employee/per month, paid for one full year, should be created by the student start-up.
    c) **Revenues Generated:** At least 5 Lakhs INR of Cumulative revenues should be generated by the student start-up as per Audited Profit and Loss Statements.
    d) **Surplus Generated:** At least 5 Lakhs INR of Cumulative surpluses should be generated by the student start-up as per Audited Profit and Loss Statements.
    e) **Patent Application or Granted:** The student start-up should have applied for registration of One Indian or International Patent OR such patent should be granted to the start-up

Other modalities and guidelines as per the AICTE policy shall be adhered to.

Students opting for the 'Start-up: Launching and Sustaining' program have the flexibility to create 'graduation outcomes' within 4 years of registering under the 'Start-up: Launching and Sustaining' program. It would be mentioned in the Academic Transcript that the student has graduated through the 'Start-up: Launching and Sustaining' Graduation Programme.

Students who join only the 'Start-up: Launching and Sustaining' stream and are either unable to meet the requisite graduation outcomes or unable to continue for any reason can opt to fall back into the academic stream through the regular registration of the University Semesters.

SPPU may suitably verify the details of fulfilment of the two out of the five measurable outcomes listed above.

9.8 Additional Specialization:
    1. A student who has earned the MBA with a MAJOR Specialization may enroll for additional specialization after passing out the regular MBA programme.
    2. Additional specialization can be pursued in the MAJOR Specialization ONLY. i.e. Additional specialization cannot be pursued in the Specializations which are listed as MINOR ONLY.
    3. Such students will be exempted from appearing for all the generic core and generic elective courses.
    4. Such students shall have to appear for the subject core and subject elective courses of the additional specialization that they have opted for.
    5. Students opting for MAJOR + MINOR specialization combination are NOT eligible to enroll for additional specialization.

10.0 Passing Standards:
    1. A student shall be said to have earned the credits for a course if he/she earns minimum 40% marks.
    2. Formative Evaluation and Summative Evaluation shall be separate heads of passing.

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[6] As per AICTE Policy approved by the Executive Committee in its 100th meeting held on June 28, 2016

10.1 Grading System: The Indirect and Absolute Grading System shall be used, i.e. the assessment of individual Courses in the concerned examinations will be on the basis of marks. However the marks shall later be converted into Grades by a defined mechanism wherein the overall performance of the learners can be reflected after considering the Credit Points for any given course. The overall evaluation shall be designated in terms of Grade. The 10 point standard scale mandated by UGC shall be used.

The performance of a student will be evaluated in terms of two indices, viz.
   (a) Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester
   (b) Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point in time

10.2 Scaling Down of CCE Scores: The marks obtained by the student for the CCE shall be scaled down, to the required extent, if percentage of the marks of CCE exceeds the percentage of marks scored in the ESE (End Semester University Examination) by 25% for the respective course.

10.3 Degree Requirements: The degree requirements for the MBA programme are completion of minimum 110 credits.

10.4 Maximum Attempts per Course:
   1. A student shall earn the credits for a given course in maximum FOUR attempts.
   2. Dropping a course and opting for another equivalent course can be done ONLY in the case of Generic Elective (GE - UL) , Generic Elective (GE - IL) and Subject Elective (SE - IL).
   3. If a student drops a course and opts for another course in lieu of the dropped course the attempts utilized for the dropped course shall be included in the maximum 4 attempts available to earn the credits for a course.
   4. The facility of dropping a course and opting for a new course in lieu of the dropped course shall be availed by the student only once per course during these four attempts available to him.
   5. A student may drop at the most 4 courses (GE – UL / GE – IL / SE – IL).

10.5 Maximum Duration for completion of the Programme: The candidates shall complete the MBA Programme **within 4 years** from the date of admission.

10.6 Grade Improvement:
   1. A Candidate who has secured any grade other than F (i.e. passed the MBA programme) and desires to avail the Grade Improvement option, may apply under Grade Improvement Scheme within five years from passing that Examination.
   2. He/she can avail not more than three attempts, according to the syllabus in existence, for grade improvement.
   3. He /she shall appear for University Evaluation of **at least 1/3rd** of the Generic Core / Subject Core Courses (except SIP) for the purpose of Grade Improvement.
   4. Generic Elective (GE - UL), Generic Elective (GE - IL) & Subject Elective (SE - IL) cannot be selected for Grade Improvement.

11. Miscellaneous
   11.1 **Attendance:** The student must meet the requirement of **75% attendance per semester per course** for grant of the term. The institute may condone the shortage in attendance in exceptional circumstances, up to a maximum of 10%. The institute shall have the right to withhold the student from appearing for examination of a specific course if the above requirement is not fulfilled.
   11.2 **Medium of Instruction:** The medium of Instruction & Evaluation shall be English.
   11.3 LTP indicated in the syllabus is indicative.
   11.4 Numbers indicated against each unit indicate L+T. These are indicative in nature. Course teachers may modify based on teaching & assessment, evaluation methods adopted.
   11.5 Text Books and Reference Books refer to latest edition.

12. Detailed Course List for each category of courses is provided in Annexure I.

13. Detailed syllabus of each course is provided in Annexure II.

ANNEXURE I

Course No.	Course Code	Course	Semester
GENERIC CORE (GC) COURSES – 3 Credits Each			
50 Marks CCE, 50 Marks ESE			
101	GC – 01	Managerial Accounting	I
102	GC – 02	Organizational Behaviour	I
103	GC – 03	Economic Analysis for Business Decisions	I
104	GC – 04	Business Research Methods	I
105	GC – 05	Basics of Marketing	I
106	GC – 06	Digital Business	I
201	GC – 07	Marketing Management	II
202	GC – 08	Financial Management	II
203	GC – 09	Human Resources Management	II
204	GC – 10	Operations & Supply Chain Management	II
301	GC – 11	Strategic Management	III
302	GC – 12	Decision Science	III
303	GC – 13	Summer Internship Project*	III
401	GC – 14	Enterprise Performance Management	IV
402	GC – 15	Indian Ethos & Business Ethics	IV

* Six Credits

GENERIC ELECTIVES UNIVERSITY LEVEL (GE – UL) COURSES – 2 Credits Each			
00 Marks CCE , 50 Marks ESE			
Course #	Course Code	Course	Semester
Any 3 courses to be selected from the following list in Semester I			
107	GE - UL - 01	Management Fundamentals	I
108	GE - UL - 02	Indian Economy	I
109	GE - UL - 03	Entrepreneurship Development	I
110	GE - UL - 04	Essentials of Psychology for Managers	I
111	GE - UL - 05	Legal Aspects of Business	I
112	GE - UL - 06	Demand Analysis & Forecasting	I
Any 3 courses to be selected from the following list in Semester II			
207	GE - UL - 07	Contemporary Frameworks in Management	II
208	GE - UL - 08	Geopolitics & World Economic Systems	II
209	GE - UL - 09	Start Up and New Venture Management	II
210	GE - UL - 10	Qualitative Research Methods	II
211	GE - UL - 11	Business, Government & Society	II
212	GE - UL - 12	Business Process Re-engineering	II
Any 3 courses to be selected from the following list in Semester III			
306	GE - UL - 13	International Business Economics	III
307	GE - UL - 14	International Business Environment	III
308	GE - UL - 15	Project Management	III
309	GE - UL - 16	Knowledge Management	III
310	GE - UL - 17	Corporate Governance	III
311	GE - UL - 18	Management of Non-profit organizations	III
Any 2 courses to be selected from the following list in Semester IV			
405	GE - UL - 19	Global Strategic Management	IV
406	GE - UL - 20	Technology Competition and Strategy	IV
407	GE - UL - 21	Cyber Laws	IV
408	GE - UL - 22	Corporate Social Responsibility & Sustainability	IV

Course No.	Course Code	Course	Semester
GENERIC ELECTIVES INSTITUTE LEVEL (GE – IL) COURSES – 2 Credits Each			
50 Marks CCE , 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 3 courses to be selected from the following list in Semester I			
113	GE - IL - 01	Verbal Communication Lab	I
114	GE - IL - 02	Enterprise Analysis & Desk Research	I
115	GE - IL - 03	Selling & Negotiation Skills Lab	I
116	GE - IL - 04	MS Excel	I
117	GE - IL - 05	Business Systems & Procedures	I
118	GE – IL- 06	Managing Innovation	I
119	GE – IL- 07	Foreign Language – I	I
Maximum 1 course to be selected from the following list in Semester II			
213	GE – IL - 08	Written Analysis and Communication Lab	II
214	GE – IL - 09	Industry Analysis & Desk Research	II
215	GE – IL - 10	Entrepreneurship Lab	II
216	GE – IL - 11	SPSS	II
217	GE – IL - 12	Foreign Language – II	II

SUBJECT CORE (SC) COURSES: Specialization – Marketing Management (MKT)			
3 Credits Each, 50 Marks CCE, 50 Marks ESE			
Course No.	Course Code	Course	Semester
205 MKT	SC – MKT- 01	Marketing Research	II
206 MKT	SC – MKT- 02	Consumer Behaviour	II
304 MKT	SC – MKT- 03	Services Marketing	III
305 MKT	SC – MKT- 04	Sales & Distribution Management	III
403 MKT	SC – MKT- 05	Marketing 4.0	IV
404 MKT	SC – MKT- 06	Marketing Strategy	IV

SUBJECT ELECTIVE (SE - IL) COURSES: Specialization – Marketing Management (MKT)			
2 Credits Each, 50 Marks CCE, 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 2 courses to be selected from the following list in Semester II			
217 MKT	SE – IL - MKT- 01	Integrated Marketing Communications	II
218 MKT	SE – IL - MKT- 02	Product & Brand Management	II
219 MKT	SE – IL - MKT- 03	Personal Selling Lab	II
220 MKT	SE – IL - MKT- 04	Digital Marketing - I	II
221 MKT	SE – IL - MKT- 05	Marketing of Financial Services - I	II
222 MKT	SE – IL - MKT- 06	Marketing of Luxury Products	II
Maximum 3 courses to be selected from the following list in Semester III			
312 MKT	SE – IL - MKT- 07	Business to Business Marketing	III
313 MKT	SE – IL - MKT- 08	International Marketing	III
314 MKT	SE – IL - MKT- 09	Digital Marketing - II	III
315 MKT	SE – IL - MKT- 10	Marketing of Financial Services - II	III
316 MKT	SE – IL - MKT- 11	Marketing Analytics	III
317 MKT	SE – IL - MKT- 12	Marketing of High Technology Products	III
Maximum 2 courses to be selected from the following list in Semester IV			
409 MKT	SE – IL - MKT- 13	Customer Relationship Management	IV
410 MKT	SE – IL - MKT- 14	Rural & Agriculture Marketing	IV
411 MKT	SE – IL - MKT- 15	Tourism & Hospitality Marketing	IV
412 MKT	SE – IL - MKT- 16	Retail Marketing	IV
413 MKT	SE – IL - MKT- 17	Retailing Analytics	IV
414 MKT	SE – IL - MKT- 18	Marketing to Emerging Markets & Bottom of the Pyramid	IV

SUBJECT CORE (SC) COURSES: Specialization – Financial Management (FIN)			
3 Credits Each, 50 Marks CCE, 50 Marks ESE			
Course No.	Course Code	Course	Semester
205 FIN	SC – FIN - 01	Financial Markets and Banking Operations	II
206 FIN	SC – FIN - 02	Personal Financial Planning	II
304 FIN	SC – FIN - 03	Advanced Financial Management	III
305 FIN	SC – FIN - 04	International Finance	III
403 FIN	SC – FIN - 05	Financial Laws	IV
404 FIN	SC – FIN - 06	Current Trends & Cases in Finance	IV

SUBJECT ELECTIVE (SE - IL) COURSES: Specialization – Financial Management (FIN)			
2 Credits Each, 50 Marks CCE, 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 2 courses to be selected from the following list in Semester II			
217 FIN	SE – IL - FIN - 01	Securities Analysis & Portfolio Management	II
218 FIN	SE – IL - FIN - 02	Futures and Options	II
219 FIN	SE - IL - FIN - 03	Direct Taxation	II
220 FIN	SE - IL - FIN - 04	Financial Reporting	II
221 FIN	SE - IL - FIN - 05	Retail Credit Management- Lending & Recovery	II
222 FIN	SE - IL - FIN - 06	Banking Laws & Regulations	II
223 FIN	SE - IL - FIN - 07	Fundamentals of Life Insurance – Products and Underwriting	II
224 FIN	SE - IL - FIN - 08	General Insurance - Health and Vehicle	II
Maximum 3 courses to be selected from the following list in Semester III			
312 FIN	SE - IL - FIN - 09	Behavioural Finance	III
313 FIN	SE - IL - FIN - 10	Technical Analysis of Financial Markets	III
314 FIN	SE - IL - FIN - 11	Commodities Markets	III
315 FIN	SE - IL - FIN – 12	Indirect Taxation	III
316 FIN	SE - IL - FIN – 13	Corporate Financial Restructuring	III
317 FIN	SE - IL - FIN - 14	Financial Modeling	III
318 FIN	SE - IL - FIN – 15	Digital Banking	III
319 FIN	SE - IL - FIN – 16	Treasury Management	III
320 FIN	SE - IL - FIN – 17	Project Finance and Trade Finance	III
321 FIN	SE - IL - FIN – 18	Insurance Laws & Regulations	III
322 FIN	SE - IL - FIN – 19	Marine Insurance	III
323 FIN	SE - IL - FIN – 20	Fire Insurance	III
Maximum 2 courses to be selected from the following list in Semester IV			
409 FIN	SE - IL - FIN – 21	Fixed Income Securities	IV
410 FIN	SE - IL - FIN – 22	Business Valuation	IV
411 FIN	SE - IL - FIN – 23	Risk Management	IV
412 FIN	SE - IL - FIN – 24	Strategic Cost Management	IV
413 FIN	SE - IL - FIN – 25	Rural and Micro Finance	IV
414 FIN	SE - IL - FIN - 26	Reinsurance	IV
415 FIN	SE - IL - FIN – 27	Agricultural Insurance	IV

SUBJECT CORE (SC) COURSES: Specialization – Human Resource Management (HRM)			
3 Credits Each, 50 Marks CCE, 50 Marks ESE			
Course No.	Course Code	Course	Semester
205 HR	SC – HRM – 01	Competency Based Human Resource Management	II
206 HR	SC – HRM – 02	Employee Relations & Labour Legislation	II
304 HR	SC – HRM - 03	Strategic Human Resource Management	III
305 HR	SC – HRM - 04	HR Operations	III
403 HR	SC – HRM - 05	Organizational Diagnosis & Development	IV
404 HR	SC – HRM - 06	Current Trends & Cases in Human Resource Management	IV

SUBJECT ELECTIVE (SE - IL) COURSES: Specialization – Human Resource Management (HRM)			
2 Credits Each, 50 Marks CCE, 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 2 courses to be selected from the following list in Semester II			
217 HRM	SE – IL - HRM - 01	Labour Welfare	II
218 HRM	SE – IL - HRM - 02	Lab in Recruitment and Selection	II
219 HRM	SE – IL - HRM - 03	Learning and Development	II
220 HRM	SE – IL - HRM - 04	Public Relations & Corporate Communications	II
221 HRM	SE – IL - HRM - 05	HR Analytics	II
222 HRM	SE – IL - HRM - 06	Conflict and Negotiation Management	II
Maximum 3 courses to be selected from the following list in Semester III			
312 HR	SE – IL - HRM - 07	Talent Management	III
313 HR	SE – IL - HRM - 08	Psychometric Testing and Assessment	III
314 HR	SE – IL - HRM - 09	HR perspective in Mergers and Acquisition	III
315 HR	SE – IL - HRM - 10	International HR	III
316 HR	SE – IL - HRM - 11	Mentoring and Coaching	III
317 HR	SE – IL - HRM - 12	Compensation and Reward management	III
318 HR	SE – IL - HRM - 13	Performance Management System	III
319 HR	SE – IL - HRM - 14	Change Management & New Technologies in HRM	III
Maximum 2 courses to be selected from the following list in Semester IV			
409 HR	SE – IL - HRM - 15	Labour Legislation	IV
410 HR	SE – IL - HRM - 16	Designing HR Policies	IV
411 HR	SE – IL - HRM - 17	Labour Economics and Costing	IV
412 HR	SE – IL - HRM - 18	Best Practices in HRM	IV
413 HR	SE – IL - HRM - 19	Employee Engagement and Ownership	IV
414 HR	SE – IL - HRM – 20	Leadership and Succession Planning	IV
415 HR	SE – IL - HRM - 21	E - HRM	IV

SUBJECT CORE (SC) COURSES: Specialization – Operations & Supply Chain Management (OSCM)			
3 Credits Each, 50 Marks CCE, 50 Marks ESE			
Course No.	Course Code	Course	Semester
205 OSCM	SC – OSCM - 01	Services Operations Management - I	II
206 OSCM	SC – OSCM - 02	Supply Chain Management	II
304 OSCM	SC – OSCM - 03	Services Operations Management - II	III
305 OSCM	SC – OSCM - 04	Logistics Management	III
403 OSCM	SC – OSCM - 05	E Supply Chains & Logistics	IV
404 OSCM	SC – OSCM - 06	Industry 4.0	IV

SUBJECT ELECTIVE (SE - IL) COURSES : Specialization – Operations & Supply Chain Management (OSCM)			
2 Credits Each, 50 Marks CCE, 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 2 courses to be selected from the following list in Semester II			
217 OSCM	SE – IL - OSCM - 01	Planning & Control of Operations	II
218 OSCM	SE – IL - OSCM - 02	Productivity Management	II
219 OSCM	SE – IL - OSCM - 03	Inventory Management	II
220 OSCM	SE – IL - OSCM - 04	Theory of Constraints	II
221 OSCM	SE – IL - OSCM - 05	Quality Management Standards	II
222 OSCM	SE – IL - OSCM - 06	Service Value Chain Management	II
Maximum 3 courses to be selected from the following list in Semester III			
312 OSCM	SE – IL - OSCM – 07	Manufacturing Resource Planning	III
313 OSCM	SE – IL - OSCM – 08	Sustainable Supply Chains	III
314 OSCM	SE – IL - OSCM – 09	Business Excellence	III
315 OSCM	SE – IL - OSCM – 10	Toyota Production System	III
316 OSCM	SE – IL - OSCM – 11	Operations and Services Strategy	III
317 OSCM	SE – IL - OSCM – 12	Six Sigma for Operations	III
Maximum 2 courses to be selected from the following list in Semester IV			
409 OSCM	SE – IL - OSCM – 14	Enterprise Resource Planning	IV
410 OSCM	SE – IL - OSCM – 15	World Class Manufacturing	IV
411 OSCM	SE – IL - OSCM – 16	Supply Chain Strategy	IV
412 OSCM	SE – IL – OSCM – 17	Financial Perspectives in Operations Management	IV
413 OSCM	SE – IL - OSCM – 18	Facilities Planning	IV
414 OSCM	SE – IL - OSCM – 19	Purchasing and Supplier Relationship Management	IV
415 OSCM	SE – IL - OSCM - 20	Strategic Supply Chain Management	IV

SUBJECT CORE (SC) COURSES: Specialization – Business Analytics (BA)			
3 Credits Each, 50 Marks CCE, 50 Marks ESE			
Course No.	Course Code	Course	Semester
205 BA	SC – BA - 01	Basic Business Analytics using R	II
206 BA	SC – BA - 02	Data Mining	II
304 BA	SC – BA - 03	Advanced Statistical Methods using R	III
305 BA	SC – BA - 04	Machine Learning & Cognitive intelligence using Python	III
403 BA	SC – BA - 05	Economics of Network Industries	IV
404 BA	SC – BA - 06	Artificial Intelligence in Business Applications	IV

SUBJECT ELECTIVE (SE - IL) COURSES: Specialization – Business Analytics (BA)			
2 Credits Each, 50 Marks CCE, 00 Marks ESE			
Course No.	Course Code	Course	Semester
Maximum 2 courses to be selected from the following list in Semester II			
217 BA	SE – IL - BA - 01	Marketing Analytics	II
218 BA	SE – IL - BA - 02	Retailing Analytics	II
219 BA	SE – IL - BA - 03	Workforce Analytics	II
220 BA	SE – IL - BA - 04	Tableau	II
221 BA	SE – IL - BA - 05	Data Warehousing Project Life Cycle Management	Ìl
Maximum 3 courses to be selected from the following list in Semester III			
312 BA	SE – IL - BA – 06	Social Media, Web & Text Analytics	III
313 BA	SE – IL - BA – 07	Industrial Internet of Things	III
314 BA	SE – IL - BA – 08	Supply Chain Analytics	III
315 BA	SE – IL - BA – 09	Cognos Analytics	III
316 BA	SE – IL - BA – 10	Predictive Modelling using SPSS Modeler	III
317 BA	SE – IL - BA – 11	E commerce Analytics - I	III
Maximum 2 courses to be selected from the following list in Semester IV			
409 BA	SE – IL - BA - 13	E Commerce Analytics - II	IV
410 BA	SE – IL - BA - 14	Healthcare Analytics	IV
411 BA	SE – IL - BA – 15	Watson	IV
412 BA	SE – IL - BA – 16	Scala and Spark	IV

[D] FOUNDATION (FOU) COURSES (ELECTIVES) – 1 Credit Each			
25 Marks CCE, 00 Marks ESE			
Between ZERO to SIX courses to be selected from the following list in Semester I and / or Between ZERO to FOUR courses to be selected from the following list in Semester II			
Course No.	Course Code	Course	Semester
1	FOU - 001	Elementary English	I
2	FOU - 002	Elementary Mathematics & Statistics	I
3	FOU - 003	Elementary Economics	I
4	FOU - 004	Elementary Accounting	I
5	FOU - 005	Elementary Information Technology	I
6	FOU - 006	Elementary Business Etiquette	I
7	FOU - 007	Elementary MS WORD	II
8	FOU - 008	Elementary MS POWERPOINT	II
9	FOU - 009	Elementary Data Interpretation & Logical Reasoning	II
10	FOU - 010	Elementary Verbal and Reading Comprehension	II
11	FOU - 011	Elementary Quantitative Ability	II

[E] ENRICHMENT (ENR) COURSES (ELECTIVES) – 1 Credit Each				
25 Marks CCE, 00 Marks ESE				
Between ZERO to SIX courses to be selected from the following list in Semester I and / or Between ZERO to FOUR courses to be selected from the following list in Semester II and / or Between ZERO to TWO courses to be selected from the following list in Semester III and / or Between ZERO to FOUR courses to be selected from the following list in Semester IV				
Course No	Course Code	Proficiency Track	Course	Semester
1	ENR - 1	Entrepreneurship	Entrepreneurship in The Online Economy – Seminar	Any
2	ENR - 2	Entrepreneurship	Management Skills for MSMEs – Seminar	Any
3	ENR - 3	Entrepreneurship	Business Plan for Small Business - Case Study Development and Presentation	Any
4	ENR - 4	Entrepreneurship	The Elevator Pitch - Case Study Development and Presentation	Any
5	ENR - 5	Entrepreneurship	Private Equity – Seminar	Any
6	ENR - 6	Entrepreneurship	Launching & Sustaining Start-Ups- Case Study Development and Presentation	Any
7	ENR - 7	Entrepreneurship	Start-Up Fest	Any
8	ENR - 8	Entrepreneurship	Marketing on a shoe string budget for Small Business - Case Study Development and Presentation	Any
9	ENR - 9	Entrepreneurship	Growing business through Franchising - Case Study Development and Presentation	Any
10	ENR - 10	Entrepreneurship	Finance and Accounting aspects of Small Businesses - Case Study Development and Presentation	Any
11	ENR - 11	Entrepreneurship	Planning, Structuring, and Financing Small Businesses - Case Study Development and Presentation	Any
12	ENR - 12	Entrepreneurship	Digital Marketing for MSMEs- Case Study Development and Presentation	Any
13	ENR - 13	Entrepreneurship	Legal Compliances for MSMEs – Seminar	Any
14	ENR - 14	Entrepreneurship	Contemporary Indian Models in Entrepreneurship - Case Study Development and Presentation	Any
15	ENR - 15	Entrepreneurship	Women Entrepreneurs in Contemporary India - Case Study Development and Presentation	Any
16	ENR - 16	Desk Research	Review of National Databases & Reports	Any
17	ENR - 17	Desk Research	Review of Industry Databases	Any
18	ENR - 18	Desk Research	Review of Industry Best Practice Surveys	Any
19	ENR - 19	Desk Research	Review of Global Best Practice Surveys	Any
20	ENR - 20	Desk Research	Review of TED Talks	Any
21	ENR - 21	Desk Research	Book Reviews	Any
22	ENR - 22	Desk Research	Emerging Trends in Business - Seminar	Any

23	ENR - 23	Desk Research	Best Business Practices - Case Study Development and Presentation	Any
24	ENR - 24	Desk Research	Disruptive Business Practices - Case Study Development and Presentation	Any
25	ENR - 25	Desk Research	Business Houses & Business Families in India - Case Study Development and Presentation	Any
26	ENR - 26	Desk Research	Industry Specific Governance & Compliances - Seminar	Any
27	ENR - 27	Desk Research	Business Excellence Awards & Awardees - Case Study Development and Presentation	Any
28	ENR - 28	Managerial Effectiveness	Design Thinking Workshop	Any
29	ENR - 29	Managerial Effectiveness	Problem Solving Tools & Techniques Workshop	Any
30	ENR - 30	Managerial Effectiveness	Theory of Constraints Workshop	Any
31	ENR - 31	Managerial Effectiveness	Six Sigma Applications in Business Workshop	Any
32	ENR - 32	Managerial Effectiveness	Budgeting Workshop	Any
33	ENR - 33	Managerial Effectiveness	i-Lab Design Thinking Projects Workshop	Any
34	ENR - 34	Managerial Effectiveness	Public Relations Workshop	Any
35	ENR - 35	Managerial Effectiveness	Cross Cultural Relationship Marketing Workshop	Any
36	ENR - 36	Managerial Effectiveness	Digital Productivity Tools Workshop	Any
37	ENR - 37	Managerial Effectiveness	Effective Meetings Management Workshop	Any
38	ENR - 38	Managerial Effectiveness	Balanced Score Card - Case Study Development and Presentation	Any
39	ENR - 39	Perspectives on Management	Management Thinkers & Contributions - Seminar	Any
40	ENR – 40	Perspectives on Management	Enduring Management Principles & Thoughts - Seminar	Any
41	ENR - 41	Perspectives on Management	Mysteries in Management - Seminar	Any
42	ENR - 42	Perspectives on Management	Management - The Future Frontiers - Seminar	Any
43	ENR - 43	Perspectives on Management	Leaderships Lessons from Non-business leaders – Seminar	Any
44	ENR - 44	Perspectives on Management	Leadership Lessons from Antiquity - Seminar	Any
45	ENR - 45	Perspectives on Management	Leading in the 21st Century - Case Study Development and Presentation	Any
46	ENR - 46	Perspectives on Management	Strategy in a VUCA world - Case Study Development and Presentation	Any
47	ENR - 47	Economy & Polity	The Economics & Politics of NGOs - Case Study Development and Presentation	Any
48	ENR - 48	Economy & Polity	Politics & Governance - Seminar	Any
49	ENR - 49	Economy & Polity	Climate Change Politics & Policy - Seminar	Any
50	ENR - 50	Economy & Polity	Energy Economics - Seminar	Any
51	ENR - 51	Economy & Polity	Civil Society, New Social Movements & Public Policy - Case Study Development and Presentation	Any
52	ENR - 52	Economy & Polity	Corporations, NGOs & Civil societies - Seminar	Any

53	ENR - 53	Economy & Polity	Environment & Development - Seminar	Any
54	ENR - 54	Economy & Polity	Globalization & Localization - Seminar	Any
55	ENR - 55	Economy & Polity	Strategic Transformation and Change in the Indian Economy - Case Study Development and Presentation	Any
56	ENR - 56	Communication	Verbal Communication & Presentation Skills Workshop	Any
57	ENR - 57	Communication	Visual Communication Workshop	Any
58	ENR - 58	Communication	Communication Through Theatre Techniques Workshop	Any
59	ENR - 59	Communication	Technical Writing Workshop	Any
60	ENR - 60	Communication	Walk the Talk - Leader / Entrepreneur Interviews Lab	Any
61	ENR - 61	Communication	Creative Writing Workshop	Any
62	ENR - 62	Communication	Blog Writing Workshop	Any
63	ENR - 63	Behavioural & Interpersonal Skills	Transactional Analysis Lab	Any
64	ENR - 64	Behavioural & Interpersonal Skills	Emotional Intelligence & Managerial Effectiveness Lab	Any
65	ENR - 65	Behavioural & Interpersonal Skills	Influence & Persuasion Lab	Any
66	ENR - 66	Behavioural & Interpersonal Skills	Negotiation Skills Lab	Any
67	ENR - 67	Behavioural & Interpersonal Skills	Team Selling Lab	Any
68	ENR - 68	Technology	Technology Clinic	Any
69	ENR - 69	Technology	Digital Innovation and Transformation – Seminar	Any
70	ENR - 70	Technology	Social Impact of Technology - Case Study Development and Presentation	Any
71	ENR - 71	Technology	Technology Commercialization – Seminar	Any
72	ENR - 72	Technology	Intellectual Property Rights – Seminar	Any
73	ENR - 73	Technology	Strategy and Technology – Seminar	Any
74	ENR - 74	Technology	Internet of Things – Seminar	Any
75	ENR - 75	Technology	Cyber Security – Seminar	Any
76	ENR - 76	Technology	Gamification Workshop	Any
77	ENR - 77	Understanding India	Skill-India - Case Study Development and Presentation	Any
78	ENR - 78	Understanding India	Smart-Cities - Case Study Development and Presentation	Any
79	ENR - 79	Understanding India	Swacch Bharat - Case Study Development and Presentation	Any
80	ENR - 80	Understanding India	Make-in-India - Case Study Development and Presentation	Any
81	ENR - 81	Understanding India	Constitution of India – Seminar	Any
82	ENR - 82	Understanding India	Indian Social Structure - Case Study Development and Presentation	Any
83	ENR - 83	Understanding India	Methodological Foundations of Indian Scientific Tradition – Seminar	Any
84	ENR - 84	Understanding India	Some Scientific Concepts from Sanskrit Texts – Seminar	Any
85	ENR - 85	Understanding India	Film Appreciation - Case Study Development and Presentation	Any
86	ENR - 86	Understanding India	Culture, Diversity & Society – Seminar	Any

87	ENR - 87	Understanding India	Contemporary Debates in Business & Society – Seminar	Any
88	ENR - 88	Understanding India	Consumerism and Sociology of the Family – Seminar	Any
89	ENR - 89	Understanding India	Culture and Media – Seminar	Any
90	ENR - 90	Understanding India	Business History – Seminar	Any
91	ENR - 91	Unconventional Sectors	Educational Institutions Management - Case Study Development and Presentation	Any
92	ENR - 92	Unconventional Sectors	The Business of Bollywood - Case Study Development and Presentation	Any
93	ENR - 93	Unconventional Sectors	Contemporary Sports: A Business Perspective - Case Study Development and Presentation	Any
94	ENR - 94	Unconventional Sectors	Managing Public Festivals , Exhibitions & Fairs - Case Study Development and Presentation	Any
95	ENR - 95	Unconventional Sectors	Agro Tourism- Case Study Development and Presentation	Any
96	ENR - 96	Ethics & Social Responsibility	Rural Immersion Project	Any
97	ENR - 97	Ethics & Social Responsibility	Managing for bottom of the Pyramid Business – Seminar	Any
98	ENR - 98	Ethics & Social Responsibility	Digital Technologies For Social Inclusion - Case Study Development and Presentation	Any
99	ENR - 99	Ethics & Social Responsibility	Social Impact Analysis for Local Community Projects - Case Study Development and Presentation	Any
100	ENR - 100	Ethics & Social Responsibility	Social & Ethical Aspects of Healthcare – Seminar	Any
101	ENR - 101	Ethics & Social Responsibility	Spirituality for Managers – Seminar	Any
102	ENR – 102	Personal Interest Course	Yoga	Any
103	ENR – 103	Personal Interest Course	Vedic Maths	Any
104	ENR – 104	Personal Interest Course	Graphology	Any
105	ENR – 105	Personal Interest Course	Caligraphy	Any
106	ENR – 106	Personal Interest Course	Music	Any
107	ENR – 107	Personal Interest Course	Dance	Any
108	ENR – 108	Personal Interest Course	Adventure Sports	Any
109	ENR – 109	Personal Interest Course	Hackathon	Any
110	ENR - 110	Personal Interest Course	Local Community Development Project	Any
111	ENR - 111	Personal Interest Course	Videography	Any
112	ENR - 112	Personal Interest Course	Fine Arts	Any

[F] ALTERNATIVE STUDY CREDIT COURSES (ASCC) (ELECTIVES) – 2 Credit Each			
50 Marks CCE, 00 Marks ESE			
Between ZERO to THREE courses to be selected from the following list in Semester I# and / or Between ZERO to THREE courses to be selected from the following list in Semester II# and / or Between ZERO to THREE courses to be selected from the following list in Semester III# and / or Between ZERO to TWO courses to be selected from the following list in Semester IV#			
Course No.	Course Code	Course	Semester
1	ASCC - 001	MOOCs	Any
2	ASCC - 002	Professional Certification Programs	Any
3	ASCC - 003	CSR Project	Any
4	ASCC - 004	Innovation Projects	Any
5	ASCC - 005	Industry or Academic Internships	Any
6	ASCC - 006	Field/Live Projects	Any

 # Same type of course can be selected multiple number of times.

MINOR ONLY SPECIALIZATIONS

Specialization – Rural & Agri -Business Management (RABM)

Course No.	Course Code	Course	Semester
2 CORE courses as per the following list – in Semester III or Semester IV			
1	SC – RABM – 01	Agriculture and Indian Economy	III
2	SC – RABM – 02	ICT for Agriculture Management	IV
Any 2 ELECTIVE courses to be selected from the following list – either in Semester III or Semester IV			
1	SE – RABM – 03	Rural Credit and Finance	III
2	SE – RABM – 04	Rural Marketing - I	III
3	SE– RABM – 05	Agri – Entrepreneurship	IV
4	SE – RABM – 06	Rural Marketing II	IV

Specialization – Pharma & Health Care Management (PHCM)

Course No.	Course Code	Course	Semester
2 CORE courses as per the following list – in Semester III or Semester IV			
1	SC – PHCM- 01	Fundamentals of Pharma and Healthcare Management	III
2	SC – PHCM- 02	Pharma and healthcare regulatory environment in India	IV
Any 2 ELECTIVE courses to be selected from the following list – either in Semester III or Semester IV			
1	SE – PHCM- 03	Strategic Planning & Healthcare Management	III
2	SE – PHCM- 04	Information Technology in Pharma and Healthcare	III
3	SE – PHCM- 05	Pharmaceutical Import and Export	IV
4	SE – PHCM- 06	Entrepreneurship in Pharma and Healthcare	IV

Specialization – Tourism & Hospitality Management (THM)

Course No.	Course Code	Course	Semester
2 CORE courses as per the following list – in Semester III & Semester IV			
1	SC – THM – 01	Fundamentals of Hospitality Management	III
2	SC – THM - 02	Tourism & Travel Management	IV
Any 2 ELECTIVE courses to be selected from the following list – either in Semester III or Semester IV			
1	SE – THM - 03	Event Management	III
2	SE – THM - 04	Tourism Planning & Development	III
3	SE – THM - 05	Strategic Hospitality Management	IV
4	SE – THM - 06	Revenue Management	IV

Specialization – International Business Management (IB)

Course No.	Course Code	Course	Semester
2 CORE courses as per the following list – in Semester III & Semester IV			
1	SC – IB – 01	Import Export Documentation and Procedures	III
2	SC – IB - 02	Global Trade and Logistics Management	IV
Any 2 ELECTIVE courses to be selected from the following list – either in Semester III or Semester IV			
1	SE – IB - 03	Cross Cultural Management and Global Leadership	III
2	SE – IB - 04	International Business and Employment Laws	III
3	SE – IB- 05	Global Competitiveness, Value Chains and Alliances	IV
4	SE – IB- 06	International Banking and Foreign Exchange Management	IV

ANNEXURE II – COURSE WISE DETAILED SYLLABUS

Generic Core Courses (Compulsory) – Semester I & II		
Semester I		101 – Managerial Accounting
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO101.1	REMEMBERING	DESCRIBE the basic concepts related to Accounting, Financial Statements, Cost Accounting, Marginal Costing, Budgetary Control and Standard Costing
CO101.2	UNDERSTANDING	EXPLAIN in detail, all the theoretical concepts taught through the syllabus.
CO101.3	APPLYING	PERFORM all the necessary calculations through the relevant numerical problems.
CO101.4	ANALYSING	ANALYSE the situation and decide the key financial as well as non-financial elements involved in the situation.
CO101.5	EVALUATING	EVALUATE the financial impact of the decision.

1.   Basic Concepts: Forms of Business Organization. Meaning and Importance of Accounting in Business Organization, Basic concepts and terms used in accounting, Capital & Revenue Expenditure, Capital & Revenue Receipts, Users of Accounting Information. Accounting Concepts and Conventions, Fundamental Accounting Equation, Journal, Ledger and Trial Balance. **(4+2)**

2.   Financial Statements: Meaning of Financial Statements, Importance and Objectives of Financial Statements. Preparation of Final Accounts of sole proprietary firm. **(7 + 2)**

3.   Cost Accounting: Basic Concepts of Cost Accounting, Objectives,Importance and Advantages of Cost Accounting, Cost Centre, Cost Unit, Elements of Cost, Classification and Analysis of Costs, Relevant and Irrelevant Costs, Differential Costs, Sunk Cost, Opportunity Cost, Preparation of Cost Sheet. **(8 + 2)**

4.   Short Term Business Decision Techniques – Marginal Costing: Meaning, Principles, Advantages and Limitations, Contribution, P/V Ratio, Break-Even Point (BEP), Cost Volume Profit (CVP) Analysis, Short Term Business Decisions– Product Mix Decisions, Make or Buy (Outsourcing) Decisions, Accept or Reject Special Order Decisions, Shutting Down Decisions. **(8 + 2)**

5.   Exercising Control – Budgetary Control & Standard Costing: *Budgetary Control*: Meaning of Budget and Budgeting, Importance, Advantages and Disadvantages, Functional Budgets–Raw Material Purchase & Procurement Budget, Cash Budget and Flexible Budget. *Standard Costing:* Meaning, Importance, Advantages and Disadvantages, Cost Variance Analysis. Material Variances– Material Cost Variance, Material Rate Variance, Material Usage Variance, Material Mix Variance and Material Yield Variance. Labour Variances –Labour Cost Variance, Labour Rate Variance, Labour Efficiency Variance, Labour Mix Variance, Labour Idle Time Variance and Labour Yield Variance. **(8 + 2)**

Note: Numerical Problems will be asked on the following –
1.   Final Accounts of Sole Proprietary Firm
2.   Preparation of Cost Sheet
3.   Marginal Costing and Short-Term Business Decisions
4.   Raw Material Purchase & Procurement Budget, Cash Budget, Flexible Budget
5.   Material Variances and Labour Variances

Suggested Text Books:
1.   Management Accounting, Khan and Jain, Tata McGraw Hill
2.   Fundamentals of Management Accounting, H. V.Jhamb
3.   Managerial Accounting, Dr. Mahesh Abale and Dr. Shriprakash Soni
4.   Management Accounting, Dr. Mahesh Kulkarni

Suggested Reference Books:
1.   Financial Cost and Management Accounting, P.Periasamy
2.   Financial Accounting for Management, Shankarnarayanan Ramanath, CENGAGE Learning
3.   Accounting For Management, S. N. Maheshwari

4. Management Accounting, MadhuVij
5. Fundamentals of Management Accounting, H. V.Jhamb
6. Cost and Management Accounting, M. N. Arora
7. Financial Accounting for Managers, Sanjay Dhmija, Pearson Publications
8. Management Accounting, Mr. Anthony Atkinson, Robert Kaplan, Pearson
9. Accounting For Management, Jawarhar Lal
10. Accounting, Shukla Grewal
11. Management Accounting, Ravi Kishore
12. Accounting for Managers, Dearden and Bhattacharya

Semester I		102 - Organizational Behaviour
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO102.1	REMEMBERING	DESCRIBE the major theories, concepts, terms, models, frameworks and research findings in the field of organizational behavior.
CO102.2	UNDERSTANDING	EXPLAIN the implications of organizational behavior from the perspectives of employees, managers, leaders and the organization.
CO102.3	APPLYING	MAKE USE OF the Theories, Models, Principles and Frameworks of organizational behavior in specific organizational settings.
CO102.4	ANALYSING	DECONSTRUCT the role of individual, groups, managers and leaders in influencing how people behave and in influencing organizational culture at large.
CO102.5	EVALUATING	FORMULATE approaches to reorient individual, team, managerial and leadership behaviour inorder to achieve organizational goals.
CO102.6	CREATING	ELABORATE UPON the challenges in shaping organizational behavior, organizational culture and organizational change.

1.   Fundamentals of OB: Evolution of management thought , five functions of management, Definition, scope and importance of OB, Relationship between OB and the individual, Evolution of OB, Models of OB (Autocratic, Custodial, Supportive, Collegial & SOBC), Limitations of OB. **Values, Attitudes and Emotions**: Introduction, Values, Attitudes, Definition and Concept of Emotions, Emotional Intelligence - Fundamentals of Emotional Intelligence, The Emotional Competence Framework, Benefits of Emotional Intelligence , difference between EQ and IQ. **Personality & Attitude**: Definition Personality, importance of personality in Performance, The Myers-Briggs Type Indicator and The Big Five personality model, Johari Window , Transaction Analysis , Definition Attitude Importance of attitude in an organization, Right Attitude, Components of attitude, Relationship between behavior and attitude. **(7+2)**

2.   Perception: Meaning and concept of perception, Factors influencing perception, Selective perception, Attribution theory, Perceptual process, Social perception (stereotyping and halo effect). **Motivation:** Definition & Concept of Motive & Motivation, The Content Theories of Motivation (Maslow's Need Hierarchy & Herzberg's Two Factor model Theory), The Process Theories (Vroom's expectancy Theory & Porter Lawler model), Contemporary Theories- Equity Theory of Work Motivation. **(8+2)**

3.   Group and Team Dynamics : The Meaning of Group & Group behavior & Group Dynamics, Types of Groups, The Five -Stage Model of Group Development Team Effectiveness & Team Building. **Leadership:** Introduction, Managers V/s Leaders. Overview of Leadership- Traits and Types, Theories of Leadership.- Trait and Behavioral Theories. **(8+2)**

4.   Conflict Management – Definition and Meaning, Sources of Conflict, Types of Conflict, Conflict Management Approaches. **Organizational Culture:** Meaning and Nature of Organization Culture - Origin of Organization Culture, Functions of Organization Culture, Types of Culture, Creating and Maintaining Organization Culture, Managing Cultural Diversity. **(7+2)**

5.   Stress at workplace: Work Stressors – Prevention and Management of stress – Balancing work and Life, workplace spirituality. **Organizational Change:** Meaning, definition & Nature of Organizational Change, Types of Organizational change, Forces that acts as stimulants to change. Kurt Lewin's- Three step model, How to overcome the Resistance to Change, Methods of Implementing Organizational Change, Developing a Learning Organization. **(5+2)**

Note: Evolution of Management thought to OB and functions of management to be covered in brief as a background interface to the subject only

Suggested Text Books:
1. Organizational Behaviour, Robins
2. Organizational Behaviour, Nelson & Quick
3. Organizational Behaviour, Fred Luthans
4. Organizational Behaviour, Stephen Robins, Timothy Judge, Neharika Vohra
5. Organizational Behaviour, M N Mishra
6. Organizational Behaviour, K Ashwathappa

Suggested Reference Books
1. Understanding OB, Uday Pareek
2. Change & Knowledge Management, Janakiram, Ravindra and Shubha Murlidhar
3. Human Resource Management, Nkomo, CENGAGE Learning

Semester I		103 – Economic Analysis for Business Decisions
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO103.1	REMEMBERING	DEFINE the key terms in micro-economics.
CO103.2	UNDERSTANDING	EXPLAIN the key terms in micro-economics, from a managerial perspective.
CO103.3	APPLYING	IDENTIFY the various issues in an economics context and DEMONSTRATE their significance from the perspective of business decision making.
CO103.4	ANALYSING	EXAMINE the inter-relationships between various facets of micro-economics from the perspective of a consumer, firm, industry, market, competition and business cycles.
CO103.5	EVALUATING	DEVELOP critical thinking based on principles of micro-economics for informed business decision making.
CO103.6	CREATING	ANTICIPATE how other firms in an industry and consumers will respond to economic decisions made by a business, and how to incorporate these responses into their own decisions.

1. **Managerial Economics:** Concept of Economy, Economics, Microeconomics, Macroeconomics. Nature and Scope of Managerial Economics, Managerial Economics and decision-making. Concept of Firm, Market, Objectives of Firm: Profit Maximization Model, Economist Theory of the Firm, Cyert and March's Behavior Theory, Marris' Growth Maximisation Model, Baumol's Static and Dynamic Models, Williamson's Managerial Discretionary Theory. **(6+1)**

2. **Utility & Demand Analysis:** Utility – Meaning, Utility analysis, Measurement of utility, Law of diminishing marginal utility, Indifference curve, Consumer's equilibrium - Budget line and Consumer surplus. Demand - Concept of Demand, Types of Demand, Determinants of Demand, Law of Demand, Elasticity of Demand, Exceptions to Law of Demand. Uses of the concept of elasticity. Forecasting: Introduction, Meaning and Forecasting, Level of Demand Forecasting, Criteria for Good Demand Forecasting, Methods of Demand Forecasting, Survey Methods, Statistical Methods, Qualitative Methods, Demand Forecasting for a New Products. (Demand Forecasting methods - Conceptual treatment only numericals not expected) **(8+1)**

3. **Supply & Market Equilibrium:** Introduction, Meaning of Supply and Law of Supply, Exceptions to the Law of Supply, Changes or Shifts in Supply. Elasticity of supply, Factors Determining Elasticity of Supply, Practical Importance, Market Equilibrium and Changes in Market Equilibrium. Production Analysis: Introduction, Meaning of Production and Production Function, Cost of Production. Cost Analysis: Private costs and Social Costs, Accounting Costs and Economic costs, Short run and Long Run costs, Economies of scale, Cost-Output Relationship - Cost Function, Cost-Output Relationships in the Short Run, and Cost-Output Relationships in the Long Run. **(8+1)**

4. **Revenue Analysis and Pricing Policies:** Introduction, Revenue: Meaning and Types, Relationship between Revenues and Price Elasticity of Demand, Pricing Policies, Objectives of Pricing Policies, Cost plus pricing. Marginal cost

pricing. Cyclical pricing. Penetration Pricing. Price Leadership, Price Skimming. Transfer pricing. Price Determination under Perfect Competition- Introduction, Market and Market Structure, Perfect Competition, Price-Output Determination under Perfect Competition, Short-run Industry Equilibrium under Perfect Competition, Short-run Firm Equilibrium under Perfect Competition, Long-run Industry Equilibrium under Perfect Competition, Long-run Firm Equilibrium under Perfect Competition. Pricing Under Imperfect Competition- Introduction, Monopoly, Price Discrimination under Monopoly, Bilateral Monopoly, Monopolistic Competition, Oligopoly, Collusive Oligopoly and Price Leadership, Pricing Power, Duopoly, Industry Analysis. Profit Policy: Break Even analysis. Profit Forecasting. Need for Government Intervention in Markets. Price Controls. Support Price. Preventions and Control of Monopolies. System of Dual Price. **(11+1)**

5. **Consumption Function and Investment Function:** Introduction, Consumption Function, Investment Function, Marginal efficiency of capital and business expectations, Multiplier, Accelerator. Business Cycle: Introduction, Meaning and Features, Theories of Business Cycles, Measures to Control Business Cycles, Business Cycles and Business Decisions. **(7+1)**

Suggested Text Books:
1. Managerial Economics, Peterson, Lewis, Sudhir Jain, Pearson, Prentice Hall
2. Managerial Economics, D. Salvatore, McGraw Hill, New Delhi.
3. Managerial Economics, Pearson and Lewis, Prentice Hall, New Delhi
4. Managerial Economics, G.S. Gupta, T M H, New Delhi.
5. Managerial Economics, Mote, Paul and Gupta, T M H, New Delhi.

Suggested Reference Books:
1. Managerial Economics, Homas and Maurice, Tata McGraw Hill
2. Managerial Economics - Analysis, Problems and Cases, P.L. Mehta, Sultan Chand Sons, New Delhi.
3. Managerial Economics, Varshney and Maheshwari, Sultan Chand and Sons, New Delhi.
4. Managerial Economics, D.M.Mithani
5. Managerial Economics, Joel Dean, Prentice Hall, USA.
6. Managerial Economics by H L Ahuja, S Chand & Co. New Delhi.

Semester I		104 - Business Research Methods
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO104.1	REMEMBERING	DEFINE various concepts & terms associated with scientific business research.
CO104.2	UNDERSTANDING	EXPLAIN the terms and concepts used in all aspects of scientific business research.
CO104.3	APPLYING	MAKE USE OF scientific principles of research to SOLVE contemporary business research problems.
CO104.4	ANALYSING	EXAMINE the various facets of a research problem and ILLUSTRATE the relevant aspects of the research process from a data driven decision perspective.
CO104.5	EVALUATING	JUDGE the suitability of alternative research designs, sampling designs, data collection instruments and data analysis options in the context of a given real-life business research problem from a data driven decision perspective.
CO104.6	CREATING	FORMULATE alternative research designs, sampling designs, data collection instruments, testable hypotheses, data analysis strategies and research reports to address real-life business research problems.

1. Foundations of Research: Definition of Research, Need of business research, Characteristics of scientific research method, Typical Research applications in business and management. **Questions in Research**: Formulation of Research Problem – Management Question – Research Question – Investigation Question. **The process of business research**: Literature review - Concepts and theories - Research questions - Sampling - Data collection - Data analysis - Writing up - The iterative nature of business research process, Elements of a Research Proposal. **Practical considerations:** Values – researcher & organization. Ethical principles - Harm to participants, Lack of informed consent, Invasion of privacy,

Deception, Reciprocity and trust, Affiliation and conflicts of interest. Legal considerations - Data management, Copyright. **(6+1)**

2. Research Design: Concept, Features of a robust research design. Exploratory, Descriptive, Quasi Experimental, Experimental research designs, Concept of Cause and Effect, Difference between Correlation and causation. Types of Variables – Independent, Dependent, concomitant, mediating, moderating, extraneous variables, Basic knowledge of Treatment & Control group, Case study design. Cross-sectional and Longitudinal designs, Qualitative and Quantitative research approaches, Pros and Cons of various designs, choice of a research design. **Hypothesis:** Definition, research Hypothesis, Statistical hypothesis, Null hypothesis, Alternative Hypothesis, Directional Hypothesis, Non-directional hypothesis. Qualities of a good Hypothesis, Framing Null Hypothesis & Alternative Hypothesis. Concept of Hypothesis Testing - Logic & Importance. **(7+1)**

3. Data & Measurement: Meaning of data, Need for data. **Secondary Data:** Definition, Sources, Characteristics, Advantages and disadvantages over primary data, Quality of secondary data - Sufficiency, adequacy, reliability and consistency. **Primary Data:** Definition, Advantages and disadvantages over secondary data. **Measurement:** Concept of measurement, What is measured? Problems in measurement in management research - Validity and Reliability, Levels of measurement - Nominal, Ordinal, Interval, Ratio. **Attitude Scaling Techniques:** Concept of Scale – Rating Scales viz. Likert Scales, Semantic Differential Scales, Constant Sum Scales, Graphic Rating Scales – Ranking Scales – Paired Comparison & Forced Ranking - Concept and Application. **Questionnaire:** Questionnaire Construction - Personal Interviews, Telephonic survey Interviewing, Online questionnaire tools. **(8+1)**

4. Sampling: Basic Concepts: Defining the Universe, Concepts of Statistical Population, Sample, Characteristics of a good sample. Sampling Frame, determining the sample frame, Sampling errors, Non Sampling errors, Methods to reduce the errors, Sample Size constraints, Non Response. **Probability Sample**: Simple Random Sample, Systematic Sample, Stratified Random Sample, Area Sampling & Cluster Sampling. **Non Probability Sample:** Judgment Sampling, Convenience Sampling, Purposive Sampling, Quota Sampling & Snowballing Sampling methods. **Determining size of the sample**: Practical considerations in sampling and sample size, (sample size determination formulae and numericals not expected) **(9+1)**

5. Data Analysis & Report Writing: Data Analysis: Cleaning of Data, Editing, Coding, Tabular representation of data, frequency tables, Univariate analysis - Interpretation of Mean, Median Mode; Standard deviation, Coefficient of Variation. **Graphical Representation of Data:** Appropriate Usage of Bar charts, Pie charts, Line charts, Histograms. **Bivariate Analysis:** Cross tabulations, Bivariate Correlation Analysis - meaning & types of correlation, Karl Person's coefficient of correlation and spearman's rank correlation. Chi-square test including testing hypothesis of association, association of attributes. **Linear Regression Analysis:** Meaning of regression, Purpose and use, Linear regression; Interpretation of regression co-efficient, Applications in business scenarios. **Test of Significance:** Small sample tests: t (Mean, proportion) and F tests, Z test. Non-parametric tests: Binomial test of proportion, Randomness test. Analysis of Variance: One way and two-way Classifications. **Research Reports:** Structure of Research report, Report writing and Presentation. **(10+1)**

Note:
1. It is desirable to use MS Excel / SPSS / Systat for delivery of unit 5.
2. For unit 5, Formulae and calculations are not expected. Interpretation of the given data/test outcomes is expected for appropriate managerial decisions / inferences.

Suggested Text Books:
1. Business Research Methods, Donald Cooper & Pamela Schindler, TMGH.
2. Business Research Methods, Alan Bryman & Emma Bell, Oxford University Press
3. Research Methods for Social Work, Allen, Earl R. Babbie, Cengage
4. Research Methods in Business Studies: A Practical Guide, Pervez Ghauri, Dr Kjell Gronhaug, FT Prentice Hall

Suggested Reference Books:
1. Business Research Methods, William G. Zikmund, Barry J. Babin, Jon C. Carr, Mitch Griffin, Cengage Learning
2. Approaches to social research, Royce Singleton, Bruce C. Straits, Margaret Miller Straits, Oxford University Press
3. Research Methods: The Basics, Nicholas S. R. Walliman, Nicholas Walliman, Routledge,
4. Research Methodology In Management, Dr.V.P.Michael

Semester I			105 – Basics of Marketing
3 Credits	LTP: 2:1:1		Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO105.1	REMEMBERING	RECALL and REPRODUCE the various concepts, principles, frameworks and terms related to the function and role of marketing.
CO105.2	UNDERSTANDING	DEMONSTRATE the relevance of marketing management concepts and frameworks to a new or existing business across wide variety of sectors and ILLUSTRATE the role that marketing plays in the 'tool kit' of every organizational leader and manager.
CO105.3	APPLYING	APPLY marketing principles and theories to the demands of marketing function and practice in contemporary real world scenarios.
CO105.4	ANALYSING	EXAMINE and LIST marketing issues pertaining to segmentation, targeting and positioning, marketing environmental forces, consumer buying behavior, marketing mix and Product Life Cycle in the context of real world marketing offering (commodities, goods, services, e-products/ e-services).
CO105.5	EVALUATING	EXPLAIN the interrelationships between segmentation, targeting and positioning, marketing environment, consumer buying behavior, marketing mix and Product Life Cycle with real world examples.
CO105.6	CREATING	DISCUSS alternative approaches to segmentation, targeting and positioning, the marketing environment, consumer buying behavior, marketing mix and Product Life Cycle in the context of real world marketing offering (commodities, goods, services, e-products/ e-services.).

1. **Introduction to Marketing:** Definition & Functions of Marketing- Scope of Marketing, Evolution of Marketing, Core concepts of marketing – Need, Want, Demand, Customer Value, Exchange, Customer Satisfaction, Customer Delight, Customer loyalty, Concepts of Markets, Marketing V/S Market Competition, Key customer markets, market places, market spaces, Meta-markets, Digital Markets, Brick & Click Model. Impact of Globalization, Technology and Social Responsibility on Marketing. New Consumer Capabilities, New Company Capabilities. Functions of Marketing Manager. Linkage of Marketing functions with all functions in the organization. Company orientation towards market place: Product – Production - Sales – Marketing –Societal – Relational, Holistic Marketing Orientation. Selling versus marketing. Concept of Marketing Myopia. Marketing Process, Understanding Marketing as Creating, Communicating, and Delivering Value **(5+2)**

2. **Marketing Environment:** Concept of Environment, Macro Environment & Micro Environment – Components and characteristics, Needs & Trends, Major forces impacting the Macro Environment & Micro Environment, Need for analyzing the Marketing Environment. Analyzing the Political, Economic, Socio-cultural, Technical and Legal Environment. Demographics. **(5+2)**

3. **Segmentation, Target Marketing & Positioning: Segmentation** - Concept**,** Need & Benefits. Geographic, Demographic, Psychographic, Behavioural bases of segmentation for consumer goods and services. Bases for segmentation for business markets. Levels of segmentation, Criteria for effective segmentation. Market Potential & Market Share. Target Market **-** Concept of Target Markets and criteria for selection. Segment Marketing, Niche & Local Marketing, Mass marketing, Long Tail Marketing. Positioning **-** Concept of differentiation & positioning, Value Proposition & Unique Selling Proposition. **(8+2)**

4. **Consumer Behavior:** Meaning & importance of consumer behavior, Comparison between Organizational Buying behavior and consumer buying behavior, Buying roles, Five steps consumer buyer decision process – Problem Recognition, Information Search, Evaluation of Alternatives, Purchase Decision, Post Purchase behavior. Moment of Truth, Zero Moment of Truth, ZMOT, Moderating effects on consumer behavior**. (7+2)**

5. **Marketing Mix**: Origin & Concept of Marketing Mix, 7P's - Product, Price, Place, Promotion, People, Process, Physical evidence. **Product Life Cycle:** Concept & characteristics of Product Life Cycle (PLC), Relevance of PLC, Types of PLC and Strategies across stages of the PLC. **(10+2)**

Note: Real world examples / cases are expected to be analyzed in the class as well as included in the examination.

Suggested Text Books:
1. Marketing Management, Philip Kotler, Kevin Lane Keller, Abraham Koshy, Mithileshwar Jha, Pearson
2. Marketing Management, Rajan Saxena, TMGH
3. Marketing, Lamb Hair Sharma, Mc Daniel, Cengage Learning

Suggested Reference Books:
1. Principles of Marketing, Philip Kotler, Gary Armstrong, Prafulla Agnihotri, Ehasan Haque, Pearson
2. Marketing Management- Text and Cases, Tapan K Panda, Excel Books
3. Marketing Management, Ramaswamy & Namakumari, Macmillan.
4. Marketing Whitebook

Semester I		106 – Digital Business
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO106.1	REMEMBERING	DESCRIBE the conceptual framework of e commerce, mobile commerce and social commerce.
CO106.2	UNDERSTANDING	SUMMARIZE the impact of information, mobile, social, digital, IOT and related technologies on society, markets & commerce.
CO106.3	APPLYING	ILLUSTRATE value creation & competitive advantage in a digital Business environment.
CO106.4	ANALYSING	EXAMINE the changing role of intermediaries, changing nature of supply chain and payment systems in the online and offline world.
CO106.5	EVALUATING	ELABORATE upon the various types of digital business models and OUTLINE their benefits and limitations.
CO106.6	CREATING	DISCUSS the various applications of Digital Business in the present day world.

1. **Electronic Commerce:** The Digital Revolution and Society, The Digital and Social Worlds - The Digital Economy, The Digital Enterprise, Virtual Communities, Online Communities, Defining Electronic Commerce, Emerging E-Commerce Platforms. E-Business, Electronic Markets and Networks; The Content and Framework of E-Commerce, Classification of E-Commerce by the Nature of the Transactions and the Relationships Among Participants, E-Commerce Business Models, Integrating the Marketplace with the Marketspace, Web 2.0. Drivers, Benefits and Limitations of E-Commerce, Impact of E-Commerce on business, government, customers, citizens and society. **(7+2)**

2. **Mobile Commerce, Social Commerce and IoT:** Mobile Commerce, Attributes Applications and Benefits of M-Commerce, Mobile Marketing - Shopping and Advertising. **Social Commerce:** Social Commerce, Social Business (Enterprise), Social Business Networks and Social Enterprise, Social Media, Platforms for Social Networking; Social Media Marketing, Enterprise 2.0, Improved Business Models. Entrepreneur Networks, Enterprise Social Networks, The Benefits and Limitations of Social Commerce, Benefits to Customers, Retailers, Employees, players in the ecosystem. Social Collaboration (Collaboration 2.0) - Essentials of Social Collaboration, Consumer-to-Consumer Electronic Commerce (C2C), Person-to-Person models. **Internet of Things:** Concept of IoT, Smart Homes and Appliances, Smart Cities, Smart Cars, Wearable Computing and Smart Gadgets. **(7+2)**

3. **Digital Business Ecosystem:** Electronic Commerce Mechanisms, Online Purchasing Process, E-Marketplaces - Types, Components and Participants, Disintermediation and Reintermediation; Customer Shopping Mechanisms - Webstores, Malls, and Portals, Webstores, Electronic Malls , Web (Information) Portals. **Intermediaries:** Roles of Intermediaries in E-Marketplaces, Merchant Solutions: Electronic Catalogs, Search Engines, and Shopping Carts, Electronic Catalogs, E-Commerce Search Activities, Auctions - Traditional Auctions Versus E-Auctions, Dynamic Pricing. **Changing Supply Chains:** Structure of the Supply Chain, EC Order Fulfillment Process, Speeding Up Deliveries, Partnering Efforts and Outsourcing Logistics, Order Fulfillment in Make-to- Order (MTO) and Mass Customization. **Digital Payments:** Smart Cards, Stored-Value Cards, EC Micropayments, Payment Gateways, Mobile Payments, Digital and Virtual Currencies, Security, Ethical, Legal, Privacy, and Technology Issues. **(7+2)**

4.   **Digital Business Applications - I: Electronic Retailing:** B2C Electronic Retailing, Characteristics, Advantages, Limitations, E-Tailing Business Models, Classification of Models by Distribution Channel, Referring Directories, Malls with Shared Services. Social Shopping – Concept, Benefits and Drivers, Social Shopping Aids – Recommendations, Reviews, Ratings, and Marketplaces, Real-Time Online Shopping. The Online Versus Off-Line Competition, Click-and-Brick models, Product and Service Customization and Personalization. **Fintech:** E-Banking, Mobile Banking, Pure Virtual Banks, Insurance, and Stock Trading, Other Mobile Finance Applications. **Digital Government:** Government-to-Citizens, Government-to-Business, Government-to-Government, Government-to-Employees Models, Internal Efficiency and Effectiveness, E-Government and Social Networking, M-Government. **E-Learning, E-Training, and E-Books**: Basics of E-Learning, Characteristics, Advantages, Limitations, Distance Learning and Online Universities, Online Corporate Training, Social Networks and E-Learning, E-Learning Management Systems, Electronic Books. **(7+2)**

5.   **Digital Business Applications - II: Online Travel and Tourism Services:** Characteristics of Online Travel, Benefits, Limitations, and Competition in Online Travel Services. **E-Employment:** Online Job Market, Social Networks Based Job Markets, Social Recruiting, Virtual Job Fairs and Recruiting Events, Benefits and Limitations of the Electronic Job Market. **E-Health**: Definition, Electronic Medical Record Systems (EMR), Doctors' System, Patients Services, Medical Devices and Patients Surveillance. **Entertainment, Media & Gaming:** Service Industry Consumer Applications. Digital Products, Internet TV and Internet Radio, Social Television (TV) Mobile Entertainment, Mobile Marketing, Mobile Streaming Music and Video Providers, Entertainment in Cars; Gaming - Mobile Games, Social Games and Gamification, Business of Social Games, Educational Social Games; Mobile Gambling, Mobility and Sports; Social Entertainment. **(7+2)**

Note: The focus of the entire course should be on business issues and not merely on technology.

Suggested Text Books:
1.   Introduction to E Commerce & Social Commerce, Turban E , Whiteside J , King D, Outland J Springer
2.   E-Business and E-Commerce Management- Strategy, Implementation and Practice, Dave Chaffey, Pearson Education.
3.   Electronic Commerce – A Managerial Perspective, Efraim Turban, David King, Dennis Viehland, Jae Lee, Pearson Education.

Semester II		201 – Marketing Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO201.1	REMEMBERING	DESCRIBE the key terms associated with the 4 Ps of marketing.
CO201.2	UNDERSTANDING	COMPARE and CONTRAST various approaches to pricing for a real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO201.3	APPLYING	DEMONSTRATE an understanding of various channel options for a real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO201.4	ANALYSING	EXAMINE the product line of a real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO201.5	EVALUATING	EXPLAIN the role of various communication mix elements for a real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO201.6	CREATING	DESIGN a marketing plan for a real world marketing offering (commodities, goods, services, e-products/ e-services.)

1.   **Product:** Meaning, The Role of Product as a market offering, Goods & Services Continuum, Classification of consumer products- convenience, shopping, shopping, unsought goods. Classification of industrial products- materials and parts, capital items, supplies and services. The Product Hierarchy, Product Systems and Mixes, Product Line Analysis, Product Line Length, The Customer Value Hierarchy. New Product Development - Need, Booz Allen & Hamilton Classification Scheme for New Products, New Product Development Process - Idea Generation to commercialization. Branding: Concept, Definition, Commodity Vs. Brand, Product Vs Brand, Concept of Brand equity. **(7 + 2)**

2.   **Pricing:** Meaning, The Role of Pricing, Importance and Factors influencing pricing decisions. Setting the Price: Setting pricing objectives, Determining demand, Estimating costs, Analyzing competitors' pricing, Selecting pricing

method, selecting final price. Adapting the Price: Geographical pricing, Price discounts & allowances, Promotional pricing, Differentiated pricing, concept of transfer pricing, Dynamic pricing (surge pricing, auction pricing), Pricing in online marketing (free, premium, freemium). Price Change: Initiating & responding to price changes. **(7 + 2)**

3. **Place:** Meaning, The Role of Marketing Channels, Channel functions & flows, Channel Levels, Channel Design Decisions - Analyzing customers' desired service output levels, establishing objectives & constraints, Identifying & evaluating major channel alternatives. Channel Options - Introduction to Wholesaling, Retailing, Franchising, Direct marketing, Introduction to Omni channel & hybrid channel options. Market Logistics Decisions - Order processing, Warehousing, Inventory, and Logistics. **(7 + 2)**

4. **Promotion:** Meaning, The role of marketing communications in marketing effort. Communication Mix Elements - Introduction to Advertising, Sales Promotion, Personal Selling, Public Relations, Direct Marketing. Concept of Integrated Marketing Communications (IMC), Developing Effective Communication - Communication Process, Steps in Developing effective marketing communication - identifying target audience, determining communication objectives, designing a message, Choosing media, Selecting message source, Collecting feedback. Shaping the overall promotion mix: promotional mix strategy, push-pull strategies. **(7 + 2)**

5. **Product Level Planning:** Preparation & evaluation of a product level marketing plan, Nature & contents of Marketing Plans - Executive Summary, Situation Analysis, Marketing Strategy, Financials, Control. Marketing Evaluation & Control - Concept, Process & types of control - Annual Plan Control, Profitability Control, Efficiency Control, Strategic Control, Marketing audit. **(7 + 2)**

Note: Real world examples / cases are expected to be analyzed in the class as well as included in the examination.

Suggested Text Books:
1. Marketing Management, Philip Kotler, Kevin Lane Keller, Abraham Koshy, Mithileshwar Jha, Pearson
2. Marketing Management, Rajan Saxena, TMGH
3. Marketing, Lamb Hair Sharma, Mc Daniel, Cengage Learning

Suggested Reference Books:
1. Principles of Marketing, Philip Kotler, Gary Armstrong, Prafulla Agnihotri, Ehasan Haque, Pearson
2. Marketing Management- Text and Cases, Tapan K Panda, Excel Books
3. Marketing Management, Ramaswamy & Namakumari, Macmillan.
4. Marketing Whitebook

Semester II		202 – Financial Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO202.1	REMEMBERING	DESCRIBE the basic concepts related to Financial Management, Various techniques of Financial Statement Analysis, Working Capital, Capital Structure, Leverages and Capital Budgeting.
CO202.2	UNDERSTANDING	EXPLAIN in detail all theoretical concepts throughout the syllabus
CO202.3	APPLYING	PERFORM all the required calculations through relevant numerical problems.
CO202.4	ANALYSING	ANALYZE the situation and • comment on financial position of the firm • estimate working capital required • decide ideal capital structure • evaluate various project proposals
CO202.5	EVALUATING	EVALUATE impact of business decisions on Financial Statements, Working Capital, Capital Structure and Capital Budgeting of the firm

1. **Business Finance:** Introduction to Business Finance, Meaning and Definition of Financial Management, Objectives of Financial Management- (Profit Maximization and Wealth Maximization), Modern Approach to Financial Management- (Investment Decision, Financing Decision, Dividend Policy Decision), Finance and its relation with other disciplines, Functions of Finance Manager **(3+2)**

2.   Techniques of Financial Statement Analysis: Introduction, Objectives of financial statement analysis, various techniques of analysis viz Common Size Statements, Comparative Statements, Trend Analysis, Ratio Analysis, Funds Flow Statement & Cash Flow Statement **(10 + 2)**

3.   Working Capital Management: Meaning of Working Capital, its components& types, Operating Cycle, Factors affecting working capital, Estimation of working capital requirement. (Total Cost Method & Cash Cost Method) **(8 + 2)**

4.   Capital Structure: Meaning and Factors affecting Capital Structure, Different sources of finance. Concept and measurement of Cost of Capital (measurement of Specific Cost and WACC), Trading on Equity, Concept of Leverages and its types.**(6 + 2)**

5.   Capital Budgeting: Meaning, Definition of Capital Budgeting, Time value of money.Tools of evaluation of the project based on traditional techniques and modern techniques - ARR, Payback Period, Discounted Payback Period, NPV, PI & IRR **(6+2)**

Note: Numerical Problems will be asked on following topics only—
1.   Common Size Statements
2.   Comparative Statements
3.   Trend Analysis
4.   Ratio Analysis (Calculation of ratios plus its interpretation)
5.   Estimation of working capital requirement (Total Cost Method & Cash Cost Method)
6.   Operating Cycle
7.   Measurement of Specific Cost (Cost of Equity, Preference, Retained Earnings and Debt) and WACC
8.   Capital Structure
9.   Leverages
10.   Capital Budgeting (ARR, Payback Period, Discounted Payback Period, NPV, PI & IRR)

Suggested Text Books:
1.   Financial Management, Shashi K. Gupta and R.K. Sharma (Kalyani Publication)
2.   Basics of Financial Management, V.K. Saxena and C.D.Vashist (Sultan Chand & Sons)
3.   Financial Management, A Contemporary Approach, Rajesh Kothari (SAGE)
4.   Financial Management, Dr. Mahesh Abale & Dr. Shriprakash Soni (Himalaya Publishing House Pvt. Ltd.)
5.   Working Capital Management, Theory and Practice, Dr. P. Periasamy (Himalaya Publishing House)
6.   Financial Management, I M Pandey (Vikas Publishing House Pvt. Ltd)
7.   Fundamentals of Financial Management, A.P.Rao (Everest Publishing House)
8.   Advanced Financial management, N.M. Vechalekar

Suggested Reference Books:
1.   Financial Management, Rajiv Srivastava and Anil Misra (OXFORD University Press)
2.   Financial Management, Ravi Kishore (Taxmann)
3.   Financial management, V.K. Bhalla (S. Chand)
4.   Financial Management, Jonathan Berk, Peter DeMarzo and Ashok Thampy (Pearson Publication)

Semester II		203 – Human Resource Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO203.1	REMEMBERING	DESCRIBE the role of Human Resource Function in an Organization.
CO203.2	REMEMBERING	ENUMERATE the emerging trends and practices in HRM.
CO203.3	UNDERSTANDING	ILLUSTRATE the different methods of HR Acquisition and retention.
CO203.4	APPLYING	DEMONSTRATE the use of different appraisal and training methods in an Organization.
CO203.5	ANALYSING	OUTLINE the compensation strategies of an organization
CO203.6	EVALUATING	INTERPRET the sample job descriptions and job specifications for contemporary entry level roles in real world organizations.

1.   **Human Resource Management: Concept and Challenges -** Introduction, Objectives, Scope, Features of HRM, Role of HRM, Importance of HRM, Policies and Practices of HRM, Functions of HRM ,Challenges of HRM. Introduction to SHRM: Define SHRM, importance and nature. HRM Models: Harvard Model, SHRM "matching model". **(5+2)**

2.   **HR Acquisition & Retention:** Human Resource Planning: Definition, Objective, Need and Importance, HRP Process, Barriers to HRP. Job Analysis Process – Contents of Job Description & Job Specification, Job description Vs job specification, Job design, Factors affecting Job design, Job enrichment Vs job enlargement. Recruitment Introduction & Sources of Recruitment, Difference between recruitment and selection-Recruitment, Selection Process, Induction and Orientation. Career Planning-Process of career planning and development Succession Planning Process, Transfer and Promotion. Retention of Employees: Importance of retention, strategies of retention. **(8+2)**

3.   **Managing Employee Performance and Training:** Performance Appraisal & Performance Management – Definition, Objective, Importance, Appraisal Process and Appraisal Methods. Why to measure performance and its purpose. Performance Appraisal Vs Performance Management, Potential Management. Training and Development - Definition – Scope – Conceptual framework of Training and development of Employees, Role of Training in Organizations, Objectives, The Training and   Development Process, Training Need Assessment, Types of training, Difference between training and development, E-Learning. Benefits of training, Evaluation of Training Effectiveness: Kirkpatrick model. **(8+2)**

4.   **Compensation Management:** Concept, Objectives, Importance of Compensation Management, Process, Current Trends in Compensation. Factors   in compensation plan. Wage/ Salary differentials, Components of salary. Incentives and Benefits – Financial & Nonfinancial Incentive, Fringe Benefits. Employees Separation - Retirement, Termination, VRS, Golden Handshake, Suspension, Concepts & Methods, Grievance Procedure in Indian Industry. **(8+2)**

5.   **Emerging Trends in HRM:** HRIS- Need, Advantages & Uses of HRIS. HR Accounting- Concepts, Objective, Advantage, Limitation &   Method. HR Audit- Concept, Objective, Scope & Process. HR Shared Services- Concept, Objective, Benefits, Issues creating HR Shared Services.**(6+2)**

Suggested Text Books:
1.   Human Resource Management, Dr. S.S. Khanka, Sultan Chanda , Delhi
2.   Human Resource Management, Deepak Bhattacharya, Sage Publishing Ltd.
3.   Human Resource Management, Arun Monppa , Tata McGraw Hill Publishing Company
4.   Human Resource Management, Mirza & Zaiyaddin
5.   Human Resource Management, Dr. P.C.Pardeshi , Niramli Publication
6.   Human Resource Management, R.S.Dwiwedi , Vikas Publishing House.
7.   Human Resource Management, C.B.Mamoria , Himalaya Publishing House
8.   Human Resource Management, Gary Dessler Dorling Kindersley Pvt Ltd.
9.   Human Resource Management: Text and Cases, K Aswathappa , Tata McGraw Hill Publishing Compnay.
10. Performance Appraisal and Management, Himalaya Publishing House.

Suggested Reference Books:
1.   Human Resource Management in Organizations, Izabela Robinson, Jaico Publishing House.
2.   Armstrong's Essential Human Resource Management Practice - A guide to people management, Michael Armstrong, Koganpage.
3.   Applied Psychology in Human Resource Management, Cascio & Aguins, PHI.

Semester II		204 – Operations & Supply Chain Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO204.1	REMEMBERING	DEFINE basic terms and concepts related to Production, Operations, Services, Supply Chain and Quality Management.
CO204.2	UNDERSTANDING	EXPLAIN the process characteristics and their linkages with process-product matrix in a real world context.
CO204.3	APPLYING	DESCRIBE the various dimensions of production planning and control and their inter-linkages with forecasting.

CO204.4	ANALYSING	CALCULATE inventory levels and order quantities and MAKE USE OF various inventory classification methods.
CO204.5	EVALUATING	OUTLINE a typical Supply Chain Model for a product / service and ILLUSTRATE the linkages with Customer Issues, Logistic and Business Issues in a real world context.
CO204.6	CREATING	ELABORATE upon different operational issues in manufacturing and services organisations where the decision-making element is emphasized.

1. Introduction to Operations and Supply Chain Management: Definition, Concept, Significance and Functions of Operations and SCM. Evolution from manufacturing to operations management, Physical distribution to Logistics to SCM, Physical Goods and Services Perspectives. **Quality:** Definitions from various Perspectives, Customers view and Manufacturer's view, Concept of Internal Customer, Overview of TQM and LEAN Management, Impact of Global Competition, Technological Change, Ethical and Environmental Issues on Operations and Supply Chain functions. **(7+2)**

2. Operations Processes: Process Characteristics in Operations: Volume Variety and Flow. Types of Processes and Operations Systems - Continuous Flow system and intermittent flow systems. **Process Product Matrix:** Job Production, Batch Production, Assembly line and Continuous Flow, Process and Product Layout. **Service System Design Matrix:** Design of Service Systems, Service Blueprinting. **(6+2)**

3. Production Planning & Control (PPC): Role and Functions of PPC **Demand Forecasting:** Forecasting as a Planning Tool, Forecasting Time Horizon, Sources of Data for forecasting, Accuracy of Forecast, Capacity Planning. **Production Planning:** Aggregate production Planning, Alternatives for Managing Demand and Supply, Master Production Schedule, Capacity Planning - Overview of MRP, CRP, DRP , MRP II. **Production Control:** Scheduling, Loading, Scheduling of Job Shops and Floor Shops, Gantt Charts. **(8+2)**

4. Inventory Planning and Control: Continuous and intermittent demand system, concept of inventory, need for inventory, types of inventory - seasonal, decoupling, and cyclic, pipeline, safety - Implications for Inventory Control Methods. Inventory Costs **-** Concept and behavior of ordering cost, carrying cost, and shortage cost. **EOQ –** definition, basic EOQ Model, EOQ with discounts. Inventory control **-** Classification of material - ABC Analysis -VED, HML, FSN, GOLF, SOS. (Numericals expected on Basic EOQ, EOQ with discounts & ABC), Inventory turns ratios, Fixed Order quantity Model - Periodic Review and Re-order Point. **(8+2)**

5. Supply Chain Management: Supply chain concept, Generalized Supply Chain Management Model - Key Issues in SCM – Collaboration, Enterprise Extension, responsiveness, Cash-to-Cash Conversion. **Customer Service:** Supply Chain Management and customer service linkages, Availability service reliability perfect order, customer satisfaction. Enablers of SCM - Facilities, Inventory, Transportation, Information, sourcing, Pricing. **(6+2)**

Suggested Text Books:
1. Operations Management Theory & Practice, B.Mahadevan , Pearson.
2. Operations Now - Supply Chain Profitability & Performance, Byron J. Finch, McGraw Hill.
3. Production and Operations Management, R B Khanna, PHI, New Delhi..
4. Production & Operations Management, S N Chary, McGraw Hill.
5. Supply Chain Management - Strategy, Planning & Operation,Sunil Chopra, Peter Meindl, D. V. Kalra, Pearson Education.

Suggested Reference Books:
1. Supply Chain Logistics Management, Donald Bowersox, David Closs, M Bixby Cooper, Tata McGraw Hill.
2. Operations Management, William J. Stevenson, TMGH.
3. Operations Management, Lee Krajewski, Larry Ritzman, Manoj Malhotra, Pearson Education.
4. Introduction to Materials Management , J.R. Tony Arnold, Stephen Chapman, Ramakrishnan, Pearson.

Generic Courses (Electives) – University Level – Semester I & II

Semester I		107 – Management Fundamentals
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO107.1	REMEMBERING	ENUMERATE various managerial competencies and approaches to management.
CO107.2	UNDERSTANDING	EXPLAIN the role and need of Planning, Organizing, Decision Making and Controlling.
CO107.3	APPLYING	MAKE USE OF the principles of goal setting and planning for simple as well as complex tasks and small projects.
CO107.4	ANALYSING	COMPARE and CONTRAST various organizational structures of variety of business and not-for-profit entities in a real world context.
CO107.5	EVALUATING	BUILD a list of the decision making criteria used by practicing managers, leaders and entrepreneurs in routine and non-routine decision making situations and EVALUATE and EXPLAIN the same.
CO107.6	CREATING	FORMULATE and DISCUSS a basic controlling model in a real life business, start-up and not-for-profit organizational context.

1. **Basic Concepts:** Manager, Managing, Workplace, Organization, Management Functions, Mintzberg's Managerial Roles, The Universality of Management, Approaches to Management - Early Management, Classical Approach, Behavioral Approach, Quantitative Approach, Contemporary Approaches. Managerial Competencies: Communication, team work, planning and administrative, strategic and global competencies; Managerial Skills; How Is the Manager's Job Changing?, Importance of Customers to the Manager's Job, Importance of Innovation to the Manager's Job, Importance of Sustainability to the Manager's Job. **(5)**

2. **Planning:** Concept, need, nature, Management By Objectives (MBO) - Process of MBO - Benefits of MBO, Planning and Performance, Goals and Plans, Types of Goals, Types of Plans, Setting Goals and Developing Plans, Approaches to Setting Goals, Developing Plans, Approaches to Planning, Planning Effectively in Dynamic Environments. **(6)**

3. **Organizing:** Organization, Organizing, Organizational Structures, Principles of Work Specialization , Departmentalization, Chain of Command, Span of Control, Centralization and Decentralization, Formalization. Mechanistic and Organic Structures, Factors Affecting Structural Choice - Strategy, Size, Technology, Environmental Uncertainty. Traditional Organizational Designs - Simple Structure, Functional Structure, Divisional Structure, Matrix Structure, Team Structures, Project Structure, Adaptive Organizations – Boundary less Organization, Virtual Organizations, Learning Organization, Flexi Work, Tele-working, Global Organizations. **(7)**

4. **Decision Making:** The Decision-Making Process - Identifying a Problem - Identifying Decision Criteria - Allocating Weights to the Criteria - Developing Alternatives - Analyzing Alternatives - Selecting an Alternative - Implementing the Alternative - Evaluating Decision Effectiveness. Making Decisions: Rationality, Bounded Rationality, The Role of Intuition, The Role of Evidence-Based Management. Types of Decisions & Decision-Making Conditions. Decision-Making approaches - Quantitative approach, Environmental Approach, System Approach, Ethical Approach, Intuitive Approach, Case Study Approach Decision-Making Styles - Linear–Nonlinear Thinking Style Profile, Decision-Making Biases and Errors. Effective Decision Making in Today's World - Correctness of decision, Decision environment, Timing of decision, Effective communication of Decision, Participation in decision Making-Implementation of decision. **(7)**

5. **Controlling:** Controlling, Definition, need and Importance, The Control Process, Managerial Decisions in Controlling, Feed-forward / Concurrent / Feedback Controls. Financial Controls, Information Controls, Benchmarking of Best Practices. **(5)**

Suggested Text Books:
1. Fundamentals of Management by Robbins, S.P. and Decenzo, D.A., Pearson Education Asia, New Delhi.
2. Management, Koontz and Wechrich, TMGH
3. Management, Stoner, et. al., Prentice Hall of India, New Delhi.

Suggested Reference Books:
1. Management, Hellregel, Thomson Learning, Bombay
2. Management, Robbins & Coulter, Prentice Hall of Hall of India, New Delhi.
3. Management - Text & Cases, Satya Raju, PHI, New Delhi.
4. Management, Richard L. Draft, Thomson South-Western

Semester I			108 – Indian Economy
2 Credits	LTP: 2:0:0		Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO108.1	REMEMBERING	DESCRIBE the present state of Indian Economy and LIST major economic policy issues in the current context.
CO108.2	UNDERSTANDING	EXPLAIN the economic development strategy since Independence and DISCUSS the priorities in the current context.
CO108.3	APPLYING	ILLUSTRATE the economic impact of Monetary policy and Fiscal Policy, Economic Reforms, Demographic Transition in India, Changing profile of GDP, Growth and Inequality and Trade Policy in the Indian context.
CO108.4	ANALYSING	EXAMINE the changing profile of human capital, employment, productivity and ILLUSTRATE the linkages with Soft Infrastructure, growth of Start-ups, GDP composition of India.
CO108.5	EVALUATING	DETERMINE the key priority areas, across various dimensions, for the Indian Economy in the context of current economic environment.
CO108.6	CREATING	BUILD a case for co-existence of MNCs, Indian Public Sector, Indian Private Sector, SMEs, MSMEs and Start Ups in the Indian Economy.

1.   Perspective of Indian Economy: Indian Economy as a Developing Economy, Basic Characteristics Overview of Economic Planning, Role of Monetary policy and Fiscal Policy, Budget terminology, Economic Growth, GDP and GDP Trends, Money Supply & Inflation, Inflation trends, RBI – overview of role and functions, Capital Markets – overview of role and functions, Concept of Poverty, Estimates of Poverty, Poverty Line, Economic Reforms and Reduction of Poverty, Concept of Inclusion, Need of inclusive growth, Financial inclusion. Concept of Hard & Soft Infrastructure. Hard Infrastructure - Transport Infrastructure, Energy Infrastructure, Water management infrastructure, Communication Infrastructure, Solid waste management, Earth monitoring and measuring networks. Soft Infrastructure - Governance Infrastructure, Economic infrastructure, Social infrastructure, Critical Infrastructure, Urban infrastructure, Green infrastructure, Education Infrastructure, Health Infrastructure. **(6)**
2.   Human Resources and Economic Development : The Theory of Demographic Transition, Size and Growth Rate of Population in India, Quantitative Population Growth Differentials in Different Countries, The Sex Composition of Population, Age Composition of Population, Density of Population, Urbanization and Economic Growth in India, The Quality of Population, Population Projections (2001-2026), Demographic Dividend. **Human Development in India -** The Concept and Measures of Human Development, Human development Index for Various States in India, National Human Development Report, Changing profile of GDP and employment in India, GDP, Employment and Productivity per Worker in India, Relative Shift in the Shares of NSDP and Employment in Agriculture, Industry and Services in Different States. **(6)**
3.   Sectoral composition of Indian Economy: Primary, Secondary, Tertiary Sectors, Issues in Agriculture sector in India ,land reforms, Green Revolution and agriculture policies of India , Industrial development , small scale and cottage industries, Industrial Policy, Public sector in India, Services sector in India. Areas of Market Failure and Need for State Intervention, Redefining the Role of the State, Liberalization, Privatization and Globalization (LPG) Model of Development, Planning commission v/s NITI Aayog, Public Versus Private Sector Debate, Unorganised Sector and India's Informal Economy. **(6)**
4.   Inequality and Economic Power in India: FDI, Angel Investors and Start-ups, Unicorns, M&A, Investment Models, Role of State, PPP (Public-Private Partnership), Savings and Investment Trends. Growth of Large Industrial Houses Since Independence, Growth of Monopolies and Concentration of Economic Power in India, Competition Policy and Competition Law, Growth and Inequality, India as an Economic Superpower, Growth of the Indian Middle Class, Indian MNCs : Mergers and Acquisitions, Outsourcing, Nationalism and Globalization, Small-scale and Cottage Enterprises, The

Role of Small-scale Industries in Indian Economy, Poverty, Vulnerability and Unorganized Sector Employment-The High Degree of Correlation, Estimate of Organized and Unorganized Workers. **(6)**

5. **The Foreign Trade of India:** Importance of Foreign Trade for a Developing Economy, Overview of Foreign Trade Since Independence, Composition of India's Foreign Trade, Direction of India's Foreign Trade, India's Balance of Payments on Current Account, Balance of Payments Crisis, Balance of Payments Since the New Economic Reforms of 1991, India's Trade Policy, India's Foreign Trade Policy, An Analysis of Trends in Exports and Imports, Special Economic Zones (SEZs)-An Overview. **(6)**

Suggested Text Books:
1. Indian Economy , Dutt R and Sundharam K.P.M, S .Chand, Delhi
2. Indian Economy, Agarwal A. N., Vikas Publishing House, Delhi
3. Indian Economy, Misra S.K. and Pury V.K., Himalaya Publishing House, New Delhi
4. Business Environment , Bedi S K, Excel Books
5. Economic Reforms in India - A Critique, Dutt Ruddar, S. Chand, New Delhi .

Suggested Reference Books:
1. Economic Environment of Business , Adhikary, Sultan Chand and Sons
2. Business, Government and Society, George A and Steiner G A, Macmillan
3. Economic Environment of Business , Ghosh, Vikas
4. Business Environment, Francis Cherunilam, Himalaya Publishing House, Bombay
5. Industrial Economy of India, Kuchhal S.C., Chaitanya Publishing House, Allahabad

Semester I		109 – Entrepreneurship Development
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO109.1	REMEMBERING	DEFINE the key terms, LIST the Attributes and Characteristics of Entrepreneurs features and ENUMERATE the Factors influencing Entrepreneurship Growth.
CO109.2	UNDERSTANDING	DISCUSS various theories of entrepreneurship and the entrepreneurship development ecosystem in Indian context.
CO109.3	APPLYING	APPLY the theories of entrepreneurship and entrepreneurship development framework to analyze and identify entrepreneurial opportunities.
CO109.4	ANALYSING	DISCRIMINATE between potential options available for entrepreneur for embarking on establishing a Start Up
CO109.5	EVALUATING	EVALUATE the start up ecosystem and the entrepreneurial opportunities in light of requirements of a business plan.
CO109.6	CREATING	CREATE a business plan that captures entrepreneurs and variety of entrepreneur motivations, entrepreneur culture and sectoral opportunities and financing options.

1. **Entrepreneurship:** Concept of Entrepreneur. Intrapreneur, Entrepreneurship and Manager. Difference between Entrepreneur and Intrapreneur, Entrepreneur and Entrepreneurship. Attributes and Characteristics of successful entrepreneurs. Functions of an Entrepreneur, Classification of Entrepreneurs. Role of Entrepreneur in Indian Economy, Developing entrepreneurial culture, Factors influencing Entrepreneurship Growth - Economic, Non-Economic Factors, For profit or Not for profit entrepreneurs, Constraints for the Growth of Entrepreneurial Culture, Entrepreneurship as a career, Entrepreneurship as a style of management, Emerging Models of Corporate Entrepreneurship, India's start up revolution–Trends, Imperatives, benefits; the players involved in the ecosystem, Business Incubators-Rural entrepreneurship, social entrepreneurship, women entrepreneurs, Cases of Tata, Birlas, Kirloskar and new generation entrepreneurs in India. **(6)**

2.   Theories of entrepreneurship: Innovation Theory by Schumpeter & Imitating, Theory of High Achievement by McClelland, X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen. **(4)**

3.   Entrepreneurship development: Entrepreneurial Competencies, Developing Competencies. Concept of entrepreneurship development, Entrepreneur Training and developing, Role of Entrepreneur Development Programs (EDP), Role of DIC, SISI , EDII , NIESBUD, NEDB, EDP - Objectives – contents – methods - execution. Role of Mentors. Innovation and Entrepreneurship, Design Thinking Process. Role of consultancy organizations in promoting Entrepreneurs, Problems and difficulties of Entrepreneurs - Marketing Finance, Human Resource, Production; Research - external problems, Mobility of Entrepreneurs, Entrepreneurial change, occupational mobility - factors in mobility. **(6)**

4.   Role of Central Government and State Government in promoting Entrepreneurship: Introduction to various incentives, subsidies and grants, Export Oriented Units, Fiscal and Tax concessions available, Women Entrepreneurs - Role, Problems and Prospects, Reasons for low women Entrepreneurs, Assistance Programme for Small Scale Units – Institutional Framework – Role of SSI Sector in the Economy – SSI Units – Failure, Causes and Preventive Measures – Turnaround Strategies. Future of Entrepreneurship Development and Government, Start Up India, Make in India. **(5)**

5.   Enterprise Promotion: Creating Entrepreneurial Venture, Entrepreneurship Development Cycle, Business Planning Process, The business plan as an entrepreneurial tool, Elements of Business Plan, Objectives, Market Analysis, Development of product / idea - Resources, Capabilities, and strategies, identifying attributes of strategic resources, Opportunity Analysis, innovator or imitator, SWOT analysis, Internal and External Environment Analysis, Industry Analysis, Embryonic Companies and Spin off's, Porter's five forces model, Identifying the right Business Model Canvas, Seven Domains of John Mullins, Opportunities in Emerging/Transition/Decline industries, Opportunities at the bottom of the pyramid, Opportunities in social sector, Opportunities arising out of digitization, Marketing, Finance, Organization & Management, Ownership - Franchising, networking and alliances, Buying an existing business, Critical risk contingencies of the proposal, Scheduling and milestones. **(9)**

Suggested Text Books:
1.   Dynamics of Entrepreneurship Development, Vasant Desai
2.   Entrepreneurship: New Venture Creation, David H. Holt
3.   Entrepreneurship Development New Venture Creation, Satish Taneja, S.L.Gupta
4.   Project management, K. Nagarajan.
5.   Entrepreneurship: Strategies and Resources, Marc J. Dollinger

Suggested Reference Books:
1.   The Culture of Entrepreneurship, Brigitte Berger
2.   Innovation and Entrepreneurship, Peter F. Drucker
3.   Entrepreneurship, Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd
4.   Entrepreneurship As Strategy, G. Dale Meyer, Kurt A. Heppard
5.   New Vistas of Entrepreneurship: Challenges & Opportunities, A. Sahay, M.S.Chhikara
6.   Entrepreneurship and Small Business Management, Siropolis
7.   The Entrepreneurial Connection, Gurmeet Naroola
8.   Thought Leaders, Steven Brandt
9.   Corporate Entrepreneurship, Vijay Sathe
10.   Corporate Entrepreneurship: Entrepreneurial Development Inside Organizations, Michael H.Morris, Donald F.Kuratko
11.   Intrapreneurship: Gifford Pinchot
12.   Lead like an Entrepreneur, Neal Thornberry
13.   You Too Can Become an Entrepreneur, Nalinaksha Mutsuddi
14.   Make The Move: Demystifying Entrepreneurship, Ishan Gupta, Rajat Khare

Semester I		110 – Essentials of Psychology for Managers
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO110.1	REMEMBERING	DEFINE the basic concepts of psychology.
CO110.2	UNDERSTANDING	EXPLAIN the sensing and perceiving processes.
CO110.3	APPLYING	APPLY principles of learning and conditioning to human behavior.

CO110.4	ANALYSING	ILLUSTRATE the linkages between learning, memory and information processing.
CO110.5	EVALUATING	EXPLAIN the basic intrapersonal processes that influence social perception.

1. Basic Concepts: Introduction to Psychology, Definitions of Psychology, Goals of Psychology, History of Psychology, Modern Psychology, Psychology: Its Grand Issues and Key Perspectives, Psychology - Trends for the New Millennium. Biological Bases of Behavior: Neurons - Building Blocks of the Nervous System, The Nervous System - its Basic Structure and Functions, The Brain and Consciousness – states of consciousness, dreams, hallucinations, The Brain and Human Behavior, Heredity and Behavior - Genetics and Evolutionary Psychology. **(6)**

2. Sensation and Perception : Sensing and perceiving, Sensory Thresholds, Sensory Adaptation, The Senses - Hearing, Vision, Perceptual Processes, Information Processing – Bottom Up Processing, Top Down processing, Bottom Up and Top Down (together) processing, Culture, Experience & Perception, Perceptual Constancy, Perceptual Expectations, Perceptual illusions, Gestalt Theory, Perceptual Development and Learning. **(6)**

3. Learning and Conditioning: A Definition of Learning, Classical Conditioning, Instrumental Conditioning, Classical and Instrumental Conditioning Compared: Biofeedback and Reinforcement, Verbal Learning, Basic Conditioning and Learning Phenomena, Reinforcement, Schedules of reinforcement, role of reinforcement in developing subordinate Social Behavior, Transfer of Training, Learning by Observing Models, Biological Limits. **(6)**

4. Memory: Learning and Memory as Intertwined Processes, Kinds of Information Stored in Memory, Measures of Retention, The Three Components of Memory – Encoding, Storage, Retrieval, Interference Theory, Decay Theory, Information Processing I: Separate-Store Models, Information Processing II: Levels of Processing, Issues in Memory. **(6)**

5. Cognition: Thinking - Mental Imagery, Problem Solving, Decision Making. Concept Formation, Language development. Relationship between language and thinking. **Emotion:** Definition of Emotion, the Physiology of Emotion, Emotional Expression - Verbal & Non Verbal, Labelling Emotions, Theories of Emotion – Common sense theory of emotion, James Lang theory of emotion, Cannnon Bard Theory of Emotion, Cognitive Arousal Theory of Emotion**(6)**

Suggested Text Books:
1. Psychology Ciccarelli, S. K & Meyer, G.E Pearson Education Ltd.
2. Introduction to Psychology, Clifford T. Morgan, Richard A King, John R Weisz and John Schopler, Indian Edition

Suggested Reference Books:
1. Essentials of understanding psychology, Feldman.S.R, Tata Mc Graw Hill.
2. Psychology, Baron, R.A and Misra, G. Pearson Education Ltd.

Semester I		111 - Legal Aspects of Business
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO111.1	REMEMBERING	DESCRIBE the key terms involved in each Act.
CO111.2	UNDERSTANDING	SUMMARIZE the key legal provisions of each Act.
CO111.3	APPLYING	ILLUSTRATE the use of the Acts in common business situations.
CO111.4	ANALYSING	OUTLINE the various facets of basic case laws of each Act from a legal and managerial perspective.
CO111.5	EVALUATING	DEVELOP critical thinking by making judgments related to use of various provisions of the Acts in business situations

1. The Contract Act, 1872: Essential Elements of Valid Contract, Essential elements of Valid Contracts, Contracts of Indemnity & Guarantee, Contingent Contract, Quasi Contract, Discharge of contract, Breach of contract-Meaning & remedies, Agency - Creation of Agency – Agent and Principal (Relationship/rights), Types of agency. **(5+1)**

2. Sale of Goods Act, 1930: Contract of sale of goods, Conditions & warranties, Transfer of property or ownership, Performance of the Contract of Sale, Rights of unpaid seller, Sale by Auction. **(5+1)**

3. The Negotiable Instrument Act, 1881: Negotiable Instruments – Meaning, Characteristics, Types. Parties, Holder and holder in due course, Negotiation and Types of Endorsements, Dishonor of Negotiable Instrument – Noting and Protest. **(5+1)**

4. **The Companies (Amendment) Act, 2015:** Company – Definition, Meaning, Features and Types, One Person Company, Incorporation of Company – Memorandum of Association (MOA), Articles of Association (AOA), Share capital & Debentures, Acceptance of deposits, Appointment of director including woman Director. **(5+1)**

5. **The Consumer Protection Act, 1986**, Unfair & Restrictive Trade Practices, Dispute Redressal Forums – District, State & National Forum, Composition, Jurisdiction, Powers, Appellate Authority. **Information Technology Act, 2000**, Digital Signature, Electronic Governance, Electronic Records E – Contracts, E – Business models, E – Commerce & Security, Cyber Crimes. Intellectual Property Laws – Understanding of concepts of patents, copyrights, trademarks and designs. **(5+1)**

Suggested Text books:
1. Business Legislations for Management, M.C. Kuchhal
2. Elements of Mercantile Law, N.D.Kapoor
3. Business and Corporate Laws, Dr. P.C. Tulsian

Suggested Reference Books:
1. Legal Aspects of Business, Ravinder Kumar
2. Business Laws, S. D. Geet
3. Business Laws, S.S. Gulshan
4. Legal Aspects of Business, Akhileshwar Pathak

Semester I		112 – Demand Analysis and Forecasting
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO112.1	REMEMBERING	DESCRIBE the key terms associated with demand analysis, demand estimation and demand forecasting.
CO112.2	UNDERSTANDING	SUMMARIZE the use of demand forecasting in various functions of management.
CO112.3	APPLYING	IDENTIFY the pros and cons of various forecasting methods
CO112.4	ANALYSING	DECONSTRUCT a forecast into its various components
CO112.5	EVALUATING	BUILD a forecast for common products and services using time-series data.

1. **Demand Analysis**: An Overview, Significance of Demand Analysis and Forecasting, How Predictable Is the Future? Some Causes of Forecast Error, Myths versus Reality of Forecasting, Data Collection, Storage, and Processing Reality, Art-of-Forecasting, Reality of Judgmental Overrides, Reality of Unconstrained Forecasts, Constrained Forecasts, and Plans, Accuracy of Forecast , Short Run Forecast , Long Term Forecast. Applications of Forecasting – Forecasting economic trends, Sales Forecasts, Staffing forecasts, budgeting, revenue and tax planning, cash flows forecasting, raw material planning, inventory planning, etc. **(5+1)**

2. **Estimation of Demand** - Marketing Research Techniques - Consumer Surveys, Consumer Clinics and Focus Groups, Market Experiments in Test Stores. Statistical Estimation, Variable Identification, Time Series and Cross Sectional Data Collection, Specification of the Model, Estimation of the Parameters, Interpretation of Regression Statistics. **(5+1)**

3. **Forecasting Demand** : Overview of Forecasting Methods, Selecting a Forecasting Technique, Purpose of Forecast, Type of Users, Patterns in the Data Series, Lead Time, Minimum Data Requirement, Desired Accuracy, Cost of forecasting, Qualitative Forecasting Techniques - Survey and Opinion Polling Techniques, Delphi Method, Cross Impact Analysis, Historical Analogy. **(5+1)**

4. **Quantitative Forecasting Methods Using Time Series Data:** Time Series Analysis - Trend Analysis, Cyclical Variations, Seasonal Effects, Random Fluctuations, Smoothing Techniques, Moving Averages, Exponential Smoothing, Single Exponential Smoothing, Holt's Two-Parameter Method, Holt's-Winters' Method, Winters' Additive Seasonality Standard Statistical Error Terms, Specific Measures of Forecast Error, Out-of-Sample Measurement, Forecast Value Added. Barometric Techniques - Leading, Lagging and Coincident Economic Indicators, Diffusion and Composite Indexes, Choose the Appropriate Forecasting Method Use of Software Packages for Forecasting such as EXCEL. **(5+1)**

5. **New Product Forecasting**: Using Structured Judgment, Differences between Evolutionary and Revolutionary New Products, General Feeling about New Product Forecasting, New Product Forecasting Overview, What Is a Candidate

Product? New Product Forecasting Process, Structured Judgment Analysis, Structured Process Steps, Statistical Filter Step, Model Step, Forecast Step. **(5+1)**

Suggested Text Books:
1. Demand-Driven Forecasting: A Structured Approach to Forecasting, Charles W. Chase
2. Demand Forecasting for Managers, Stephan Kolassa
3. Forecasting: Principles and Practice, George Athanasopoulos and Rob J. Hyndman

Suggested Reference Books:
1. Fundamentals of Demand Planning and Forecasting - Forecasting & Planning , Chaman L. Jain and Jack Malheron

Semester II		207 – Contemporary Frameworks in Management
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO207.1	REMEMBERING	DEFINE Emotional Intelligence (EQ), IDENTIFY the benefits of emotional intelligence and RELATE the 5 Dimensions of Trait EI Model to the practice of emotional intelligence.
CO207.2	UNDERSTANDING	DESCRIBE how companies achieve transition from being good companies to great companies, and DISCUSS why and how most companies fail to make the transition.
CO207.3	APPLYING	APPLY the 21 laws that make leadership work succesfully to improve your leadership ability and ILLUSTRATE its positive impact on the whole organization.
CO207.4	ANALYSING	EXAMINE the fundamental causes of organizational politics and team failure.
CO207.5	EVALUATING	EXPLAIN the approach to being effective in attaining goals by aligning oneself to the "true north" principles based on a universal and timeless character ethic.

1. **Emotional Intelligence :** What is Emotional Intelligence, Benefits of EI, Understand the difference between Trait EI and Ability EI, 5 Dimensions of Trait EI Model - Self Awareness (SA), Managing Emotions (ME), Motivation (M), Empathy (E), Social Skills (SS) - Self awareness (SA) - Self Awareness, Seeing the other side, Giving in without giving up, Life Positions – you and only you can choose your mindset, Managing Emotions (ME) - Self-Regulation, Managing Emotions, The 'EQ brain' and how it works, The science of emotions, Understanding Emotions, Find your self-control, Using Coping Thoughts, Using Relaxation Techniques, Self-Motivation (M) – Optimism, Pessimism, The balance between optimism and pessimism, The power of re-framing, Empathy (E) – Empathy, Barriers to empathy, Developing your empathy, Social Skills (SS) - Social skills, Making an impact, Creating a powerful first impression, Assessing a situation, Being zealous without being offensive, Traits of a person with high social skills. Determine your EQ

2. **The 7 habits of highly effective people:** Paradigms and principles, Inside-out, The seven habits - an overview - Private victory Habit 1. Be proactive: principles of personal vision, Habit 2. Begin with the end in mind: principles of personal leadership, Habit 3. Put first things first: principles of personal management, Public victory. Paradigms of interdependence. Habit 4. Think win/win: principles of interpersonal leadership, Habit 5: Seek first to understand, then to be understood: principles of empathetic communication, Habit 6. Synergize: principles of creative cooperation, Renewal. Habit 7. Sharpen the sword: principles of balanced self-renewal

3. **Five dysfunctions of a team:** Absence of trust—unwilling to be vulnerable within the group, Fear of conflict—seeking artificial harmony over constructive passionate debate, Lack of commitment—feigning buy-in for group decisions creates ambiguity throughout the organization, Avoidance of accountability—ducking the responsibility to call peers on counterproductive behavior which sets low standards, Inattention to results—focusing on personal success, status and ego before team success

4. **The 21 irrefutable laws of leadership:** The law of the lid, The law of influence, The law of process, The law of navigation, The law of addition, The law of solid ground, The law of respect, The law of intuition, The law of magnetism, The law of connection, The law of the inner circle, The law of empowerment, The law of the picture, The

law of buy-in, The law of victory, The law of the big mo, The law of priorities, The law of sacrifice, The law of timing, The law of explosive growth, The law of legacy.

5. **Good to Great:** Level 5 Leadership - Leaders who are humble, but driven to do what's best for the company, First Who, Then What: Get the right people on the bus, then figure out where to go. Find the right people and try them out in different seats on the bus (different positions in the company), Confront the Brutal Facts: The Stockdale paradox, Hedgehog Concept: Three overlapping circles: What lights your fire ("passion")? What could you be best in the world at ("best at")? What makes you money ("driving resource")? Culture of Discipline: Rinsing the cottage cheese, Technology Accelerators: Using technology to accelerate growth, within the three circles of the hedgehog concept, The Flywheel: The additive effect of many small initiatives.

Suggested Reference Books:
1. Emotional Intelligence, Daniel Goleman
2. The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change, Stephen R. Covey
3. The Five Dysfunctions of a Team: A Leadership Fable , Patrick M. Lencioni
4. The 21 Irrefutable Law of Leadership-John C. Maxwell
5. Good to Great, Jim Collins

Semester II		208 - Geopolitics & World Economic Systems
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: At the end of this course, the learner shall be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO208.1	REMEMBERING	ENUMERATE the various elements of global economic system.
CO208.2	UNDERSTANDING	EXPLAIN the role of key trade organizations in the global economic system.
CO208.3	APPLYING	INDENTIFY the crucial elements of international trade laws.
CO208.4	ANALYSING	ANALYSE the forces that work for and against globalization.
CO208.5	EVALUATING	ASSESS the impact of the elements of the Global Economic System on the India Economy.

1. **Introduction to Global Economic & political Systems:** Meaning of Global Economy and its History Structure and Components of Global Economy, Theory of Hegemonic Stability, Differences among National Economies, Market Oriented Capitalism, Developmental Capitalism, Social Market Capitalism, Comparative Analysis, Effects of Globalization on Indian Economy. **(6)**

2. **The Trading System:** Debate over Free Trade – Functions of GATT and WTO, The Uruguay Round and World Trade Organization, Trade Blocs – EU, OECD, OPEC, SAARC, ASEAN, NAFTA, Threats to Open Trading System, Developments in International Trade Theory, Bi-lateral, Multilateral Trade Agreements, Impact of Trade wars in liberalized economy. **(6)**

3. **International Trade Laws:** International Contracts of Sale of Goods Transactions, International Trade Insurance, Patents, Trademarks, Copyright and Neighboring Rights. Intellectual property Rights, Dispute settlement Procedures under GATT & WTO, Payment systems in International Trade, International Labour Organization and International Labour Laws. **(6)**

4. **International Monetary System:** The International Financial System - Reform of International Monetary Affairs - The Bretton Wood System and the International Monetary Fund, Controversy over Regulation of International Finance, Developing Countries' Concerns, Exchange Rate Policy of Developing Economies. **(6)**

5. **Contemporary issues and Challenges in Global Economic Environment - Indian perspective:** Globalization and its Advocacy, Globalization and its Impact on India, Fair Globalization and the Need for Policy Framework, Globalization in Reverse Gear-The Threatened Re-emergence of Protectionism. Euro zone Crisis and its impact on India, Issues in Brexit, World recession, inflationary trends, impact of fluctuating prices of crude oil, gold etc. **(6)**

Suggested Text Books:
1. Global Political Economy, Robert Gilpin, Princeton University Press
2. International Trade Law An Interdisciplinary, Raj Bhala, Non-Western Textbook
3. International Trade Law, Indira Carr and Peter Stone

4. Development and Sustainability: India in a Global Perspective edited by Sarmila Banerjee, Anjan Chakrabarty

Suggested Reference Books:
1. International Economics, Paul Krugman, Maurice Obstfeld and Marc Melitz, Pearson, Global Edition
2. Globalizing Capital, A history of the International Monetary system, Barry Eichengreen, Princeton University Press.

Semester II		209 - Start Up and New Venture Management
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO209.1	REMEMBERING	DESCRIBE the strategic decisions involved in establishing a startup.
CO209.2	UNDERSTANDING	EXPLAIN the decision making matrix of entrepreneur in establishing a startup.
CO209.3	APPLYING	IDENTIFY the issues in developing a team to establish and grow a startup
CO209.4	ANALYSING	FORMULATE a go to market strategy for a startup.
CO209.5	EVALUATING	DESIGN a workable funding model for a proposed startup.
CO209.6	CREATING	DEVELOP a convincing business plan description to communicate value of the new venture to customers, investors and other stakeholders.

1.   Being an Entrepreneur: The entrepreneur, Profile analysis, behaviour and motivations, Lean Start –up, The entrepreneurial ecosystem, Entrepreneurs and strategic decisions , Sustainability of Entrepreneurship: Dilemmas of an entrepreneur for success; Handling doubts on survival of business, Struggles-Causes of failure–Product/ market, financing, managerial-Resilience. Legal Fundamentals - When, how and where to incorporate. **(5)**
2.   Customer Discovery: Entrepreneurial Opportunity Search and Identification; Market Intelligence, Market analysis, Market research, Customer validation, developing your business model, Crafting your value proposition, Product Development , Managing the product development process, Long Tail markets, Product launch goals, Go-to-Market Strategy, The role of selling in a startup, Sales forecasting for startups, Mapping buyer response modes. Social media Promotion tools. **(7)**
3.   The Financial Road Map: Planning/Budgeting, Developing a financial roadmap, financial statements: the four components, How to budget for startup success, Bootstrapping and alternative sources of funding, Informal capital–Friends & Family, Role of Government in ED, various schemes - PMEGP, CGTMSE, MPDA, SFURTI. Role of MSDE; Schemes by MSDE: PMKVY, SANKALP, STAR. Crowd funding, Venture capital, Private Equity, Financing Mix and the Financing continuum shareholding- Cliff -Vesting schedule-Relative importance of Operational Involvement, The Pitch, Preparing for your investor presentation, Elements of the perfect investment pitch. **(6)**
4.   Entrepreneurial Leadership: Building and managing the founder team, Attracting and retaining the right people, The Team - Board/Governance, The role of a successful board, Different board models for different ventures, How to assemble a board of advisors, separating leadership from management, Legal Matters- Organizational form–partnership, sole proprietorship, Tax, Legal expenses, hiring the service providers. Employee management and leadership in the workforce, Recruiting, selection and hiring, Hiring the first employee. **(5)**
5.   Business Plan: Need & Objectives, Target audience, Contents - Cover page and table of contents, Executive summary, Description of the current situation: Basic company information, products/services, management team, business organization, future goals, vision, and mission, Description of opportunity and market: Who are the buyers, who are the competitors, what are the competitive advantages of the company? Description of the business model, the marketing and sales strategy, Basic facts on the financials: Cash flow projection (life line), income statement (bottom line/profit and loss), balance sheet (business health/assets, liabilities, etc.), funding requirements, Risk analysis and possible exit strategies. Conclusion and appendixes: Résumés, literature, technical descriptions. Executive summary. Elevator pitch, Building a strong presentation, innovative methods of presenting a business plan –mind map, animated videos, etc. **(7)**

Suggested Text Books:
1. New Venture Management: The Entrepreneur's Roadmap (Entrepreneurship Series), Donald F. Kuratko and Jeffrey S. Hornsby, Pearson

2.   The Manual for Indian Start-ups: Tools to Start and Scale-up Your New Venture, Vijaya Kumar Ivaturi, Meena Ganesh, Penguin Random House India.
3.   Managing New Ventures, Anjan Raichoudhuri, Prentice-Hall of India Pvt.Ltd
4.   Develop Your Idea!: Get Off to a Flying Start With Your Startup. Guided Exercises, Templates & Resources for Exploring New Business Ventures, K. N. Kukoyi
5.   Managing Small Business by Longenecker, Moore, Petty and Palich, Cengage Learning, India Edition.
6.   Entrepreneurship: New Venture Creation by David H. Holt
7.   The Dynamics of Entrepreneurial Development & Management by Desai, Vasant , Himalaya Publishing House, Delhi
8.   Entrepreneurship and Small Business Management by Siropolis
9.   Lead like an Entrepreneur by Neal Thornberry

Suggested Reference Books:
1.   Fundamentals of Entrepreneurship, Nandan H, PHI
2.   Cases in Entrepreneurship by Morse and Mitchell, Sage South Asia Edition.
3.   Entrepreneurship – Indian Cases on Change Agents by K Ramchandran, TMGH.
4.   Entrepreneurship – The engine of growth, edited by Mark Rice and Timothy Habbershon, Published by Praeger Perspectives.
5.   Entrepreneurship: Theory, Process and Practice by Kuratko, D.F. & Hodgetts, R.M. Thomson Press.
6.   Entrepreneurship Development: Small Business Enterprises by Charantimath, P. , Pearson.
7.   A Guide to Entrepreneurship by David, Otes , Jaico Books Publishing House, Delhi.
8.   Indian Entrepreneurial Culture by A Gupta , New Age International.
9.   Make The Move: Demystifying Entrepreneurship by Ishan Gupta, Rajat Khare

Semester II		210 – Qualitative Research Methods
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOME
CO210.1	REMEMBERING	ENUMERATE the key terms associated with Qualitative research approach.
CO210.2	UNDERSTANDING	COMPARE and CONTRAST Qualitative research approach with the Quantitative approach.
CO210.3	APPLYING	CONSTRUCT appropriate research and sampling designs for Qualitative research work in real world business and non-business contexts
CO210.4	ANALYSING	ILLUSTRATE the use of appropriate qualitative research methods in real world business and non-business contexts.
CO210.5	EVALUATING	EVALUATE the quality of Qualitative Research work
CO210.6	CREATING	COMBINE Qualitative and Quantitative research approaches in a real world research project.

1.   **Qualitative Research:** Nature, Relevance, Need, Characteristics and Limitations of Qualitative Research, Ethics in Qualitative Research, Interrelationship of Qualitative and Quantitative Research, Linking Qualitative and Quantitative Research in One Design, Combining Qualitative and Quantitative Data, Combining Qualitative and Quantitative Methods, Linking Qualitative and Quantitative Results, Triangulation. **(5)**
2.   **Qualitative Research Design:** Basic Qualitative Research Designs, Case Studies, Comparative Studies, Retrospective Studies, Longitudinal Qualitative Studies, Appropriateness of the Approach to the Issue, Fitting the Approach into the Research Process. Qualitative Research Sampling **-** Theoretical Sampling, Gradual Selection as a General Principle in Qualitative Research, Purposive Sampling, Width or Depth as Aims of Sampling, Case Constitution in the Sample, Sample Size decisions in Qualitative Research, Principle of Saturation. **(5)**
3.   **Qualitative Research Methods:** Focused Interview, Semi-Standardized Interview, Problem-Centered Interview, Expert Interview, Group Interviews, Focus Groups, Non-participant Observation, Participant Observation, Ethnography. Grounded Theory Methodology. **(5)**
4.   **Projective Techniques:** Principle of projection, applications, association, construction, expression based techniques, design and interpretation, Zaltman's Metaphor Elicitation Techniques. **(5)**

5. **Quality Criteria in Qualitative Research:** Reliability, Validity, Objectivity, Alternative Criteria, Criteria for Evaluating the Building of Theories, Quality Assessment as a Challenge for Qualitative Research, Triangulation, Analytic Induction, Generalization in Qualitative Research, The Constant Comparative Method, Process Evaluation and Quality Management. **(5)**

Suggested Text Books:
1. An Introduction to Qualitative Research, Uwe Flick, 4th Edition, SAGE
2. Research Methods in the Social Sciences, Bridget Somekh & Cathy Lewin, 5th Edition, SAGE India

Suggested Reference Books:
1. Qualitative Research Methods in Public Relations and Marketing Communications, Christine Baymon & Immy Holloway, Routledge
2. Qualitative Journeys, Minichiello & Kottler, SAGE

Semester II		211 – Business, Government & Society
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOME
CO211.1	REMEMBERING	DESCRIBE the economic roles of government in the Indian context.
CO211.2	UNDERSTANDING	EXPLAIN the macroeconomic crises around the world.
CO211.3	APPLYING	ILLUSTRATE the interlinkages between economic growth , poverty and inequality.
CO211.4	ANALYSING	EXAMINE the rationale, success and failures of Public Private Partnerships in the Indian context.
CO211.5	EVALUATING	ASSESS the forces for and against Globalization and the socio-economic impact of Globalization.
CO211.6	CREATING	DISCUSS the interplay between technology, business and society.

1.   Roles of Business, Government, and Society: Interdependence and Conflict, Regulation of Business, Functions of State; Economic roles of government; Government and legal environment; Economic roles of Government in India; Indian experience with overall and sectoral growth, Inter-sectoral linkages and role of foreign direct investment, The Constitutional environment , Macroeconomic crises since 1990s- Indian and global experiences.
2.   Poverty, Inequality and Economic Growth: Industrial Development, Rural-Urban Dynamics, Population and Development, Finance for Development, Trade and Development, State and the Market, Privatization and Regulation, Institutions and Growth.
3.   Public Private Partnerships: The Rationale for Public Private Partnerships, Different Kinds of Public Private Partnerships with a special emphasis on the Build Operate and Transfer Model (BOT), Issues in Regulation that come about with privatization, Pricing mechanisms available to a regulator to ensure universal access and efficiency, Discussion of the privatization experience in different sectors, water, electricity, telecommunication, and railways with a special emphasis on India.
4.   Multinational Corporations: Perspectives on Globalization, Globalization: The MNC and TNC Organizations, Globalization of Brands, Globalization of the Indian Business and Firms, Coping with Global Competition, Conflict with Nation States. Domestic and Global forces - for and against Globalization, Brexit and latest developments.
5.   Business in a Global Environment: Business as Blending of People Technology and Ethical Behaviour, Achieving Business Success through Social Responsibilities, Changing Workplace - Influence of demography, influence of technology, gender issues, social justice and affirmative action, Industrial Relations.

Suggested Text Books:
1. Business, Government and Society: A Managerial Perspective byJohn Steiner, George Steiner, Tata McGraw Hill
2. Business, Government, and Society by Douglas E. Greer, Prentice Hall
3. Business and Its Environment by David P., International Edition

Semester II		212 - Business Process Reengineering
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO212.1	REMEMBERING	DEFINE the key terms associated with Business Process Reengineering.
CO212.2	UNDERSTANDING	EXPLAIN the various supporting and opposing forces to Business Process Reengineering in simple business situations.
CO212.3	APPLYING	APPLY modeling tools for simple business processes.
CO212.4	ANALYSING	FORMULATE a working plan to establish a Business Process Reengineering team.
CO212.5	EVALUATING	EVALUATE the success of a BPR initiative in relation to the impact on organizational KPIs.
CO212.6	CREATING	IMAGINE ways to improve business or non-business processes.

1. **Introduction to Business Process Reengineering (BPR): D**efinition of business processes – Concept of BPR - Definition of business process redesign, BPR - Evolution, Definition, Need for reengineering, Benefits, Role of leader & manager, Breakthrough reengineering model, BPR guiding principles, Business process reengineering & performance improvement, Key targets of BPR, Myths about BPR , What reengineering isn't , BPR and other management concepts: TQM, Quality function deployment, ISO standards, ERP. BPR and Process Simplification, BPR and Continuous Improvement. **(6)**

2. **Business vision and process objectives:** The Key Elements of BPR, Develop a Vision, Establish a Responsible Team, Prepare the Organization for Change, Redesign the Business Process, Case Studies. Business Processes, People, Information Technology. Processes to be redesigned, selection criteria, dysfunction, importance feasibility. Measuring existing processes, BPR Goals – Cycle time reduction, Cost reduction, Quality improvement, Customer Satisfaction, BPR team characteristics. **(6)**

3. **Enablers of BPR:** Enablers of BPR in manufacturing – Agile Manufacturing, Lean Manufacturing, JIT, Collaborative Manufacturing, Intelligent Manufacturing, Production Planning, Product design & development. Relationship between BPR and information technology, Role of information technology in reengineering, Criticality of IT in business process. **(6)**

4. **BPR implementation methodology:** Different BPR Methodologies, Different Phases of BPR, Relationship between BPR phases, Tools used in Modelling the Business - flow-charting, business activity maps, relational diagrams, benefit/cost analysis, Process Modelling, Notations, Case Studies. BPR KPIs Definition, Measuring KPIs, Methodologies (Common Assessment Framework (CAF), Balanced Scorecard), Case Studies. **(6)**

5. **Change Management:** The Power of Habit in organizations, Planned changes in business re-engineering projects; Factors relating to change management systems and culture, Committed and strong leadership, Factors relating to organizational structure, Factors related to BPR program management, Factors related to IT infrastructure, Factors Relating to BPR Failure, Problems in communication and organizational resistance, Lack of organizational readiness for change, Problems related to creating a culture for change, Lack of training and education, Factors related to management support, Ineffective BPR teams, A framework for barrier management.

Suggested Text Books:
1. Hammer, M. and Champy, J, Re-engineering the Corporation: A Manifesto for Business Revolution, Harper Business
2. R. Radhakrishnan S.Balasubramanian, Business Process Reengineering, PHI
3. Vikram Sethi and William R. King, Organisational Transformation through Business Process Reengineering, Pearson
4. K. Shridhara Bhatt, Business Process Reengineering, Himalaya Publications
5. Hammer, M. and Stanton, S.A, The Re-engineering Revolution, Harper Business

Suggested Reference Books:
1. Harmon, P , Business Process Change : A Guide for Business Managers and BPM and Six Sigma Professionals, Elsevier/Morgan Kaufmann Publishers.
2. Kock, N.F., Process Improvement and Organizational Learning: The Role of Collaboration Technologies, Idea Group.
3. R. Anupindi et al., Managing Business Process Flows: Principles of Operations Management, Pearson Education Inc.
4. Walford, R.B., Business Process Implementation for IT Professionals and Managers, Artech House.

5.   Henry J Johansson, H J Johansson, Mo, Business Process Reengineering, Wiley

Generic Courses (Electives) – Institute Level – Semester I & II

Semester I		113 - Verbal Communication Lab
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO113.1	REMEMBERING	RECOGNIZE the various elements of communication, channels of communication and barriers to effective communication.
CO113.2	UNDERSTANDING	EXPRESS themselves effectively in routine and special real world business interactions.
CO113.3	APPLYING	DEMONSTRATE appropriate use of body language.
CO113.4	ANALYSING	TAKE PART IN professional meetings, group discussions, telephonic calls, elementary interviews and public speaking activities.
CO113.5	EVALUATING	APPRAISE the pros and cons of sample recorded verbal communications in a business context.
CO113.6	CREATING	CREATE and DELIVER effective business presentations, using appropriate technology tools, for common business situations.

1.   **Basics of Communication:** Communication elements and process , Need of Communication Skills for Managers, Channels ,forms and dimensions of communication , Verbal and non-verbal communication, Principles of nonverbal communication - through clothes and body language , Persuasive communication: the process of persuasion, formal and informal persuasion, Barriers to communication and how to overcome the barriers, Principles of effective communication. **(5)**
2.   **Speaking :** Characteristics of effective speech, voice quality, rate of speaking, clear articulation, eye contact, use of expressions, and gestures and posture; Types of managerial speeches: speech of introduction, speech of vote of thanks, occasional speech, theme speech, formal speeches during meetings. **(5)**
3.   **Soft skills:** How communication skills and soft skills are inter-related, Body language-posture, eye-contact, handling hand movements, gait - Voice and tone, Meeting and Boardroom Protocol - Guidelines for planning a meeting, Before the meeting, On the day of the Meeting, Guidelines for Attending the meeting, For the Chairperson, For attendees, For Presenters, Telephone Etiquette, Cell phone etiquette, Telephone etiquette guidelines, Mastering the telephone courtesy, Active listening, Putting callers on hold, Transferring a call, Screening calls, Taking a message, Voice Mail, Closing the call, When Making calls, Closing the call, Handling rude or impatient clients, Cross-cultural communication, cultural sensitivity, Cross-cultural issues which affect Communication across different Cultures, Culture and non-verbal communication, Effective intercultural communication, Business and social etiquette. **(7)**
4.   **Presentation skills:** Principles of Effective Presentations, Planning, Structure and Delivery, Principles governing the use of audiovisual media, Time management - Slide design and transition: representation of textual information into visuals for effectiveness of communication - Style and persuasiveness of the message - Adherence to the number of slides, Dynamics of group presentation and individual presentation. **(5)**
5.   **Interviews:** Essentials of placement interviews, web /video conferencing, tele-meeting. Impression Formation, Tactics, The Self-presentational Motive, The Compass Qualities; First and Lasting Impressions; Magic Pills; Toxic Traits; The Social Context: Norms and Roles, The Target's Values, Physical Appearance; Communication Style; Content of Communication; Actions; The Environment; Success; Changing from the Outside-in, Current Social Image, The Private Self, Worrying about Impressions. **(5)**

Note:
1.   The entire course should be delivered with a skills development focus.
2.   Video recordings of student's performances (speaking tasks) should be carried out and used for intensive reviews for performance improvement.

Suggested Text Books:
1.   Business Communication Today, Bovee C L et. al., Pearson Education

2.   Business Communication, P.D. Chaturvedi, Pearson Education
3.   Business Communication, T N Chhabra, Bhanu Ranjan, Sun India
4.   Verbal and Non-Verbal Reasoning, Prakash, P, Macmillan India Ltd., New Delhi
5.   Objective English, Thorpe, E, and Thorpe, S, Pearson Education, New Delhi

Suggested Reference Books:
1.   Communication Skills for Effective Management, Hargie et. al., Palgrave
2.   Communication for Business, Tayler Shinley, Pearson Education
3.   Technical Communication, Anderson, P.V, Thomson Wadsworth, New Delhi
4.   The Oxford Guide to Writing and Speaking, John Seely, Oxford University Press, New Delhi
5.   Dictionary of Common Errors, Turton, N.D and Heaton, J.B, Addision Wesley Longman Ltd.

Semester I		114 - Enterprise Analysis - Desk Research
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO114.1	REMEMBERING	DESCRIBE the key historical, organizational, market related, financial, governance, leadership and social responsibility dimensions of a real world business organization.
CO114.2	UNDERSTANDING	SUMMARIZE the regional, national and global footprint of a real world business organization.
CO114.3	APPLYING	DEMONSTRATE the use of secondary – offline and online resources to profile a real world business organization.
CO114.4	ANALYSING	ANALYSE, using tables and charts, the trends in market standing and financial performance of a real world business organization over the last 5 years.
CO114.5	EVALUATING	COMPOSE a succinct summary of future plans of a real world business organization the company website, shareholders reports and other information available in the public domain.
CO114.6	CREATING	IMAGINE the key challenges and opportunities for a real world business organization in the immediate future (1 to 3 years).

1.   Enterprise History & Background: Establishment, Original & Current Promoters, Business Group or Business Family to which it belongs, Vision-Mission-Philosophy – Values-Quality Policy, Brief profiles of the Chairman, CEO, MD, Members of Board of Directors along with their career highlights CSR Initiatives, Technical and other collaborations if any, Recent Mergers and Acquisitions, if any. **(6)**

2.   Organization : Organization Structure, Geographical (domestic and global) foot print – at the time of inception and spread over the years, company's current head quarter worldwide as well as head quarter / corporate office in India, Manufacturing /Service locations Indian and major worldwide, Certifications if any - ISO / EMS / FDA / CMMI , etc. Online presence. Initiatives towards gender diversity, Initiatives towards social inclusion, Initiatives towards environment conservation. Current Talent needs. Key highlights of the company's website. **(6)**

3.   Markets: Major Customers, customer segments, Products, Product lines, Major Brands, Market Share – nationally, region wise, product wise, Advertising Agency, Advertising Punch Line/Slogan, Logo, Key Alliances in the past 5 years & impact. Mergers & Acquisitions, if any. Technological developments. Dirsuptive innovations affecting the organization. Labour unrest if any – reasons thereof and impact. Emerging potential competition through first generation entrepreneurs or global / local players. **(6)**

4.   Financials: Data to be studied, tabulated, graphically depicted, analyzed and presented for last 5 years for the Revenues, Profitability, Market Capitalization, Segmented Revenues, Auditors. Listing status & Scrip Codes – BSE and NSE, Global Listings on International Stock Markets, Share Price Face Value, Current Market Value, Annual High Low Figures, P/E Ratio, Shareholding Pattern. **(6)**

5.   Governance: Philosophy, Action taken by SEBI if any, Involvement in Scams, Insider Trading Issues, Standard & Poor's Corporate Governance Scores, CRISIL Rating. Major Awards and Achievements of the Organization in the last 5 years. Forward looking statements of the top management. **(6)**

Note:

1. Students should work in groups of 3 to 5 each under the guidance of a faculty.
2. Students shall carry out an indepth study of any THREE Organizations of their choice.
3. Organizations selected should demonstrate a variety across sectors, ownerships, size, and other key dimensions.
4. Students shall submit a structured detailed report.

Suggested Text Books:
1. No text books are prescribed.
2. The course has to be taught using the company annual reports and other publications, company website, social media feeds, business newspapers and business data bases such as ACE equity, CRISIL database, etc.

Semester I		115 - Selling & Negotiations Skills Lab
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO115.1	REMEMBERING	DESCRIBE the various selling situations and selling types.
CO115.2	UNDERSTANDING	OUTLINE the pre-sales work to be carried out by a professional salesperson.
CO115.3	APPLYING	IDENTIFY the key individuals involved in a real world sales process for a real world product/ service / e-product / e-service.
CO115.4	ANALYSING	FORMULATE a sales script for a real world sales call for a product/ service / e-product / e-service.
CO115.5	EVALUATING	DECONSTRUCT the pros and cons of sample real world sales calls for a product/ service / e-product / e-service.
CO115.6	CREATING	DEVELOP a sales proposal for a real world product/ service / e-product / e-service and for a real world selling situation.

1.   Basics of Selling: Importance of Selling**.** Role in the context of organization – survival and growth. Types of Selling - Different in selling situations, New business versus service selling, Newton's classification of sales types, McMurry & Arnold's classification of selling types, Consumer indirect selling, Industrial selling, Missionary, Sales Team/group selling Merchandising, Telesales, Franchise selling, International selling. **(5)**

2.   Pre-Selling Work : Attributes of a Good Salesperson - Personality & physical characteristics, Enthusiasm, Confidence, Intelligence, Self-worth, Knowledge- product, Competition, organization, market, customer, territory; People Buy From People, Communication skills, Persuasive skills, Personal Diary, Time management, Managing Sales Documents and collaterals management. Fear Factor in Sales. Maximising Productivity in a Sales Role, Meetings and Your Time, The Telephone - Social Media & Online Data Bases as a Sales Tools, Developing Your Script, Mailers, Pre-Call Planning, Generating Appointments. **(7)**

3.   Selling in Action: Identifying Key Individuals – Prospecting, Influencers and Decision Makers, Talking to the Right Individuals, Making that Good First Impression, How to Win Friends and Influence People, Dale Carnegies Six Principles of Relationship, What's In It For Me?, Honesty and Integrity. **(5)**

4.   Objection handling: Analyzing the Reasons for Objections, Seeing What We Can Do, Listen - Probe - Advise (L-P-A), Exercise: Objection Handling, Uncovering Objections, Seven Types of Objections, Turning Objections into Selling Opportunities. Selling Techniques: Cross Selling, Up Selling, Value Added (Suggestive) Selling, Advancing Opportunity, Exceeding Customer Expectations, Giving Recognition. **(6)**

5.   Sales Conversation, Negotiation & Closure: Starting a Quality Prospecting Conversation, Listeners Control Conversations, Trial Closing, Creating an Opportunity: Situation vs Problem Questions, Difficulty Questions, Negative and Positive Answer Questions, Directive Questions, Rhetorical Questions. Problems with Positional Bargaining, Opening Up the Negotiation, Approaches to Better Negotiation, You Have Alternatives, Reverse Psychology in Negotiation. Sales Proposals: How to Construct a Sales Proposal, Important Factors to Consider, Putting It All Together. **(7)**

Note:
1. The course should be delivered from a skills building perspective.
2. Principles should be supplemented by live exercises on personal selling

Suggested Text Books:
1. Selling & Sales Management, Geoffrey Lancaster & David Jobber, Macmillan India Ltd.
2. Negotiation: Communication for diverse settings, Michael L Spangle and Myra Isenhart, Sage South Asia Edition.
3. The Sales Bible: The Ultimate Sales Resource, Jeffrey Gitomer, Wiley India
4. How to win friends and influence People, Dale Carnegie
5. The Art of Closing the Sale, Brian Tracy, Pearson Education.

Suggested Reference Books:
1. Sales Management, Bill Donaldson, Palgrave Publications
2. You can negotiate anything, Herb Cohen
3. Managing Sales Leads, Crocker and Obermayer, American Marketing Association

Semester I			116 - MS Excel
2 Credits	LTP: 0:3:1		Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO116.1	REMEMBERING	SELECT appropriate menus and functions of MS Excel to Create, Format, Import, Merge, Save, Print Spreadsheets & Charts using business data.
CO116.2	UNDERSTANDING	SHOW how to do basic troubleshooting and fix mistakes most people make when working with spreadsheets.
CO116.3	APPLYING	USE various functions of MS Excel, Execute pivot table analysis, common (and powerful functions), and different types of lookups (vlookup, hlookup, and index/match).
CO116.4	ANALYSING	ILLUSTRATE the use of the most commonly used data-manipulation commands in MS Excel.
CO116.5	EVALUATING	DERIVE insights from multiple data sources in MS EXCEL and work with it to answer relevant business questions.
CO116.6	CREATING	CREATE standard Excel Templates for routine business data management and analysis activities.

1.   Introduction to Spreadsheets - Understanding Microsoft Excel, Excel Workbook Windows, Basic Spreadsheet Skills, Excel Help System, Opening and Closing Workbooks, Understanding Workbook File Formats, Creating New Workbooks, Selecting Cells, Auto Sum and Auto Fill Function, Cell Referencing and Request, Formatting Cells, Formatting Numbers, Placing Cell Alignment, Cell, Rows and Columns, Understanding Worksheets, Editing, Copying and Moving Cells, Page Layouts in Excel, Proofing Workbooks, Basic Options, Ribbons and Toolbar.**(4)**

2.   Defining Names in Excel, Sorting Data, Using Excel Tables, Filtering Data in Excel, Understand Charts, Chart Design Options and Tools, Chart Format Tools, Combo Charts, Functions within Excel, Understanding Date Function, Information Functions, Logical Functions, Find and Replace, Headers and Footers, Adding Comments, Conditional Formatting. **(5)**

3.   Using Text to Columns, The Paste Special Function, Data Validation, Subtotals and Grouping, Consolidating Data, Scenario Analysis, Data Tables in Scenario Analysis, What-if Analysis, Mats and Trig Functions, Text Functions in Excel, Using Lookup Functions, Vlookups, HLookups, Match, Using Statistical Functions, Database Functions, Financial Functions, Formula Auditing and Error Tracing, Hyperlinks in Excel, Linking Data, Understanding Pivot Tables, Using Pivot Charts, Workbook Properties, Protecting and Sharing Worksheets, Data Encrypting and Finalising Workbooks, Understanding Macros, Custom Number Formats in Excel, Using Custom Lists, Working with Templates, Tracking Changes in Excel, Merging and Compare Excel Workbooks. **(7)**

4.   Using Pivot tables – Slicers -Report Filters for basic analytics, Contact Management and Marketing With Excel, Managing Customers, Vendors And Employees, Gaining Product And Service Insights, Sales reports using Excel, Supervising Sales With Excel, Preparing Invoices, Assessing Account Aging, Analyzing Demographics, Creating Scheduling And Marketing Calendars, Creating Standard Excel Templates for routine business data management and analysis activities. **(7)**

5.   Managing Money With Excel, Building & Tracking Budgets, Planning And Tracking Loans, Keeping Account Registers, Creating Formulas for Financial Applications, PV, PMT, NPER, RATE, Creating Balance Sheet, Investment Calculations, Depreciation calculations, Lab based Evaluation, Gauging Business Status with Excel, Configuring Cash Flow

Statements, Resolving Business Ratios, Creating Standard Excel Templates for routine business data management and analysis activities. **(7)**

Note:
1. The entire course should be delivered in the computer lab in an application oriented manner.
2. Business Applications should be stressed rather than merely teaching Excel as a software.

Suggested Text Books:
1. Excel 2016 Bible, John Walkenbach, John Wiley & Sons
2. Excel: Formulas & Functions, Robert Dinwiddie
3. Excel 2007 for Dummies by Greg Harvey
4. New Perspectives on Microsoft Office Excel 2007
5. Microsoft Excel 2016 Step by Step, Curtis Frye

Semester I		117 - Business Systems and Procedures
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO117.1	REMEMBERING	TABULATE the key elements of a typical business system and related work flow procedures.
CO117.2	UNDERSTANDING	EXPLAIN a business system and related procedures.
CO117.3	APPLYING	PREDICT the fail points / bottle necks in a typical business process.
CO117.4	ANALYSING	BREAK DOWN a business system into simpler components and explain the inter-relationships.
CO117.5	EVALUATING	DEVELOP a process based thinking approach.
CO117.6	CREATING	CREATE standard operating procedures and flow charts / other visual representations for typical business systems and processes.

1.   **Business Systems and Procedures:** Concept and need - Characteristics of a good procedure. Writing a Standard Operating Procedure (SOP)– Procedure Identification - Information Gathering–Interviewing – Analysis – Writing – Implementation – Review- Identifying Fail Points - Fine-tuning. Process Mapping Tools – Aid Memoir – Flowchart – Swim Lane Diagrams – Flow Charting Software – Using MS Word and Excel for Flowcharting - Case Studies. Re-engineering information flow and paper flow – Process Mapping for Current and Future State Map.
2.   **Systems Study:** Process Mapping, Improvement and Writing SOP's for an entire range of activities for a typical business process in a manufacturing/ service organization. Students should visit appropriate organizations to study the real life processes.
3.   Detailed study of atleast **FIVE** Systems and underlying Procedures, such as: (list is illustrative only)
    a) Attendance Recording System in a manufacturing / service organization.
    b) Employee scheduling in a retail mall.
    c) Facilities management and scheduling system in automobile workshop.
    d) Inventory Management
    e) Just in Time Inventory System in a manufacturing / service organization.
    f) Kitchen Order Ticket (KOT) System in a Restaurant.
    g) KYC verification system in a mutual fund house.
    h) Loan approval system in a cooperative bank.
    i) Maintenance system in a facility.
    j) On-boarding of new employees in a manufacturing / service organization.
    k) Payroll Management
    l) Performance Appraisal system in a manufacturing / service organization.
    m) Point of sale (POS) system in an organized retail store.
    n) Purchase Order System in a manufacturing / service organization.
    o) Quality Audit system
    p) Receivables Management
    q) Stock Taking system in a library.
    r) Warehouse management system.

4.   Presentation of individual/group projects

Suggested Text Book:
1.   Business Process Management – A Rigorous Approach, Martyn A Ould , British Computer Society, First South Asia Edition.

Semester I		118 - Managing Innovation
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO118.1	REMEMBERING	DESCRIBE the key ideas relevant to innovation, intellectual property, business models
CO118.2	UNDERSTANDING	INTERPRET the various theories of innovation and EXPLAIN with examples the types of innovation.
CO118.3	APPLYING	EXPERIMENT WITH innovation as a systematic process and generate innovative ideas for new products and services.
CO118.4	ANALYSING	DISSECT contemporary start-up businesses for their business models, extent of innovation, success and failure.
CO118.5	EVALUATING	CREATE an inventory of product and process innovations for daily use consumer products and routine business processes in a typical organization.
CO118.6	CREATING	CREATE a potential list of innovation needs for India in the local, regional and national context and ASSESS the likelihood of constructing a business model around these needs in the current local, regional and national context.

6.   Basics of Innovation: Concept of Innovation. Invention and Creativity - Role and relationship with innovation, Product innovation and process innovation, Radical and incremental innovation, Technological innovation, commercial or organizational Innovation, Characteristics of innovation in different sectors , Innovation in Indian context, Innovation and Creativity, Jugad and innovation, Innovation in Current Environment- local, regional and national context. **(4)**
7.   Economics and Management of Innovation: Schumpeter and creative destruction, The evolutionary theory of Nelson and Winter, The model of the dynamic capabilities of David Teece, Porter and competitive advantages, The value chain, Drucker and the systematic innovation, Innovations diffusion, Speed, Adoption. Innovation and Knowledge, Tacit and explicit knowledge, Knowledge as a public good. **(5)**
8.   Models of Innovation – Static Models: Incremental versus Radical Innovation, Abernathy –Clark Model, Henderson – Clark Model, Disruptive Technological Change Model, Innovation Value – Added Chain, Strategic Leadership View, Familiarity Matrix, Imitability & Complementary Assets – Teece Model. Dynamic Models: Utterback – Abernathy Model, Tushman – Rosenkopf technology Life Cycle Model, Foster's S Curve.(7)
9.   Instruments for Innovation: Challenges of Innovation, Innovation as a systematic practice, Steps of Innovation Management, Learning Cycle, The roles of the innovator, Functional Sources of Innovation – Internal Value Chain, Spillovers from Competitors, Suppliers, Customers and Complimentary Innovators, The generation of ideas: brainstorming, Creativity, Divergent V/s Convergent Thinking, Design Thinking, Blue Ocean Strategy. Experimentation in Innovation Management, Technology Innovation Process, Idea Championship, Participation for Innovation, Co-creation for Innovation, Screening the innovative ideas, Proto typing to Incubation. **(7)**
10.   Management and Marketing of Innovation: Innovation Management Planning, Technology Forecasting, Innovation Sustainable Conditions, Management of Innovation, Concept of IPR. Creation of IPR, Types of IPR, Patents and Copyrights, Patents in India. **Business Models:** What is a Business Model? The evolution of the business model, The Business Model Canvas, Business Models and value proposition, Business Model Failure: Reasons and Remedies, Incubators: Business Vs Technology, Future markets and Innovation needs for India. **(7)**

Suggested Text Books:
1.   Innovation Management, Allan Afuah, Oxford Indian Edition.
2.   Innovation Management, Shlomo Maital and D V R Seshadri, Response Books, Sage Publications, New Delhi.
3.   Innovation: the attacker's advantage, Foster, Richard N., London, Macmillan.
4.   Adair on Creativity and Innovation, Edited by Neil Thomas, Viva Books

5. Innovating at the Edge – How organizations Evolve and Embed Innovation Capability, Tim Jones, Butterworth-Hienemann, South Asian Edition.
6. Managing Creativity & innovation, Harvard Business Essentials, Harvard Business School Press

Suggested Reference Books:
1. The Innovator's ToolKit , Harvard Business Press.
2. Fastrack to Success Innovation , Andy Bruce and David Birchall, Prentice Hall - Financial Times.
3. Getting to Innovation, Arthur B VanGundy, PHI – Eastern Economy Edition
4. Blue Ocean Strategy, Kim & Mauborgne

Semester I			119 - Foreign Language I
2 Credits	LTP: 0:3:1		Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO119.1	REMEMBERING	RECALL and SPELL simple words in the foreign language
CO119.2	UNDERSTANDING	TRANSLATE simple sentences from English to the foreign language and vice-versa.
CO119.3	APPLYING	CONSTRUCT a dialogue, in the foreign language, for basic human interactions in a social context.
CO119.4	ANALYSING	TAKE PART IN an interaction in a non-business setting using the foreign language.
CO119.5	EVALUATING	INTERPRET a short write up written in the foreign language.

1. Salutations: (a) To greet the people and say Good afternoon, Good Evening, Goodbye, ask name and say your name, seek clarification and help, numbers from 1 to 10 **(b)** To say where you live. Describe your house and members of your family. Weights and Measures, length & breadth, use of decimal system, area and volume. Cardinal numbers & Ordinal Numbers. **(c)** Ask and give personal information, Nationality, profession and language, Numbers from 11 to 50. To ask time by clock and by span, days of the week, months of the year. **(6)**

2. Conversation Skills: **(a)** To ask and express interests, Preferences; likes and dislikes; to invite, to accept the invitation or to politely decline the invitation; hobbies and how to spend your leisure. **(b)** To talk about the weather; to talk about the daily personal routine and related activities. Seasons & holidays in France/Germany/Japan. **(c)** To talk about clothing - size, colour, material. Purchase at a super market, modes of payment. To name and explain human body to express common bodily ailments (fever, headache etc.) **(6)**

3. Geographical Description: **(a)** Country, location on the world map, borders and neighboring countries, ports and industrial towns. **(b)** Information and clarification of places. Asking for directions to the public places. Modes of Transport. Numbers 51 to 100 and 1000, 10,00,000 etc. **(6)**

4. Social: (a) Visit to a restaurant, to express agreement/disagreement; to ask for price/quantity. **(b)** To talk about/express future actions, to plan a business trip with related requirements: hotel, tickets, car, Rent a car, places to visit, traffic signs etc. Documents required like Passport, International Driving license, Insurance cover etc. **(6)**

5. Business: (a) To ask about personal past events, to narrate personal experience, to comprehend difference between letters like Personal/Business Letters, telegram & e- mail; formats of Letter head and e mail. **(b)** Vocabulary relating to the Transactions at the Post office, Bank, Insurance Company – personal, health, accident, marine, equivalent terms of transaction – FOB, C.I.F, F.A.S, payment through Letter of credit. **(6)**

Note: Institute may offer any one of the following foreign languages to the students: SPANISH / FRENCH/ GERMAN/ JAPANESE / CHINESE

Suggested Text Books:
Relevant Standard Text Books, Videos, Audio CDs.

Semester II		213 - Written Analysis and Communication Lab
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO213.1	REMEMBERING	DESCRIBE stages in a typical communication cycle and the barriers to effective communication.
CO213.2	UNDERSTANDING	SUMMARIZE long essays and reports into précis and executive summaries.
CO213.3	APPLYING	USE Dictionary and Thesaurus to draft and edit a variety of business written communication.
CO213.4	ANALYSING	EXAMINE sample internal communications in a business environment for potential refinements.
CO213.5	EVALUATING	COMPOSE variety of letters, notices, memos and circulars.

1. **Written Communication:** Different types of communication like letters, memos, reports, fax, email, presentations and multimedia, choosing the means of communication, stages in communication cycle, Barriers to effective communication, communication systems. **(5)**

2. **Writing Techniques:** Rules of good writing, adaptation and selection of words, masculine words, writing with style- choosing words with right strength and vigor, using a thesaurus, writing effective sentences, developing logical paragraphs, Précis writing, Developing coherent paragraphs, overall tone, drafting, editing and finalizing the business letters. Planning the persuasive message, common types of persuasive requests, principles of persuasive communication. Reformulating and summarizing - What is a summary? Using synonyms & antonyms, reducing phrases, guidelines for writing summaries, business summaries Comprehension: using a dictionary, grammatical precision, (phonetics), contextual clues, guidelines for comprehension. **(7)**

3. **Recruitment and employment correspondence:** Application letter, curriculum vitae, interview, references, offer of employment, job description, letter of acceptance, letter of resignation, writing routine and persuasive letters. **(6)**

4. **Internal Communications:** Memoranda, meetings - agenda and minutes, Writing memos, circulars, notices and emails. Positive and negative messages such as Letter of Appreciation, Letter of Congratulations, Warning Letter, Show Case Notice. Writing Follow up letters and reminders, Writing Sales letters, collection letters, Poster Making. Report writing - What is a report , Objectives of report, types of report, Report Planning, Types of Reports, Process, Structure and Layout, planning, Nature of Headings, Ordering of Points, Logical Sequencing, Graphs, Charts, Writing an Executive Summary, List of Illustration, Technique of writing a report, characteristics of business reports. **(6)**

5. **External Communications:** Public notices, invitations to tender bid, auction, notices, etc. Writing business proposals, Preparing Press Release and Press Notes**. (6)**

Note:
1. The entire course should be delivered in a workshop and application oriented manner. It is expected that not more than 10 to 15% of the time should be devoted to the theoretical aspect.
2. Workbooks should be prepared that comprehensively cover major situations of managerial communication and should be handed over to the students right at the beginning of the course.
3. Students should be asked to submit the completed workbooks at the end of the term.

Suggested Text Books:
1. Business Communication Today, Bovee C L et. al., Pearson Education
2. Business Communication, P.D. Chaturvedi, Pearson Education
3. Business Communication, T N Chhabra, Bhanu Ranjan, Sun India
4. Verbal and Non-Verbal Reasoning, Prakash, P, Macmillan India Ltd., New Delhi
5. Objective English, Thorpe, E, and Thorpe, S, Pearson Education, New Delhi

Suggested Reference Books:
1. Communication Skills for Effective Management, Hargie et. al., Palgrave
2. Communication for Business, Tayler Shinley, Pearson Education
3. Technical Communication, Anderson, P.V, Thomson Wadsworth, New Delhi
4. The Oxford Guide to Writing and Speaking, John Seely, Oxford University Press, New Delhi

5.   Dictionary of Common Errors, Turton, N.D and Heaton, J.B, Addision Wesley Longman Ltd.

Semester II		214 - Industry Analysis - Desk Research
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO214.1	REMEMBERING	DESCRIBE the key characteristics of the players in an industry.
CO214.2	UNDERSTANDING	SUMMARIZE the management ethos and philosophy of the players in the industry.
CO214.3	APPLYING	DEMONSTRATE an understanding of the regulatory forces acting on the industry.
CO214.4	ANALYSING	COMPARE and CONTRAST, using tables and charts, the market and financial performance of the players in an industry.
CO214.5	EVALUATING	ASSESS the impact of recent developments on the industry and its key players.
CO214.6	CREATING	PREDICT the future trajectory of the evolution of the industry in the immediate future (1 to 3 years).

1.   **Industry Analysis – the Basics:** Nature of the Industry, Players in the industry, Nature of competition, Market shares of top 5 & bottom 5 players, Possible Classification of players into Leaders, Challengers, Followers, Nichers, Positioning & Differentiation strategies of key players. Branding strategies, Pricing Policies, Cartelization if any and comments thereon, Capacity analysis – total capacity of the industry and break up capacity amongst key players, Current Capacity Utilization rates, Planned future capacity additions, Geographical spread of plants/facilities/ capacities (Domestics as well as Global), Demand Supply balance in the industry – at global, national and regional level, Key factors affecting demand, Key supply side constraints, Professional Trade bodies of the Industry, Business Functions carried out Online by the key players. Online presence of the players, Incremental Innovations in the industry, Disruptive Innovations in the industry. **(5)**

2.   **Promoters & Management Ethos:** Background of promoter groups of top 5 and bottom 5 players in the industry, Management ethos and philosophy, Brief profiles of CMDs, CEOs, and key top management personnel with their career highlights, Detailed profile of one distinguished top management personnel each from any two players in the Industry, CSR policy, Corporate Governance Initiatives, Initiatives towards social inclusion, Initiatives towards environment conservation. **(5)**

3.   **External Environment:** Controlling ministry and / or regulator if any for the Industry, Regulatory Policies at the state, national and global level and their impact on the industry as a whole with analysis of impact on top 5 players and bottom 5 players, Key National and Global issues affecting the industry, Key initiatives by the Government to promote the industry, Environmental issues, CSR initiatives, Regulatory actions against the players for e.g. Action by SEBI, Competition Commission of India, MTRP Commission, FDA, etc. against irregularities , legal violations if any. **(5)**

4.   **Financials:** Profitability, Revenues, Margins of top 5 & bottom 5 players over the last 5 years and trends/changes therein, Sick players if any and their turnaround strategies, if any, Key factors contributing to costs, Ratio analysis of financial data for last 5 years for top 5 and bottom 5 companies in the industry. **(5)**

5.   **Recent Developments:** Impact of key relevant provisions of the latest Fiscal policy on the industry and various players therein, Analysis of Key relevant provisions of latest Exim Policy in case of industries that are focused on Global Markets for exports or industries that have significant import components, Key Alliances in the past 5 years and their performance & impact on other players in the industry, Mergers & Acquisitions, if any. Technological developments, Labour unrest if any – reasons thereof and impact on the particular player and the industry as a whole, emerging first generation entrepreneurs, if any, in the industry, Corporate wars & feuds in the industry, if any. **(5)**

Note:
1.   Students should work in groups of 3 to 5 each under the guidance of a faculty.
2.   Students shall carry out an indepth study of any TWO industries of their choice.
3.   Industries selected should be distinct from each other.
4.   Students shall submit a structured detailed report.

Suggested Text Books:

1. No text books are prescribed.
2. The course has to be taught using the company annual reports and other publications, company website, social media feeds, business newspapers and business data bases such as ACE equity, CRISIL database, etc.

Semester II		215 – Entrepreneurship Lab
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO215.1	REMEMBERING	IDENTIFY a basket of potential business opportunities in the local, regional or national context.
CO215.2	UNDERSTANDING	COMPARE and CONTRAST the shortlisted business opportunities to SELECT the most suitable / promising opportunity.
CO215.3	APPLYING	DEVELOP a business model around the shortlisted business opportunity.
CO215.4	ANALYSING	FORMULATE the organization structure for the proposed start up
CO215.5	EVALUATING	EVALUATE the market potential and ESTIMATE the financing requirements for the initial 1 to 3 years after launch.
CO215.6	CREATING	CREATE a proposal for funding the start up.

This course provides a hands-on experience to the students to convert and apply theoretical and conceptual knowledge about entrepreneurship into practical entrepreneurship. During the course, students shall identify and evaluate a new business opportunity (which may be supplied by an entrepreneur or innovator in the nearby region.)

Students shall work in a group, of not more than 5 students, on a real-life business case.

Scope of the work expected:
1. Business Model Designing
2. Business Plan Designing
3. Financial Planning
4. Prototype Making
5. Test Marketing
6. Planning Commercial Launch.

Suggested Text Books:
1. New Venture Management: The Entrepreneur's Roadmap (Entrepreneurship Series), Donald F. Kuratko and Jeffrey S. Hornsby, Pearson
2. The Manual for Indian Start-ups: Tools to Start and Scale-up Your New Venture, Vijaya Kumar Ivaturi, Meena Ganesh, Penguin Random House India.
3. Managing New Ventures, Anjan Raichoudhuri, Prentice-Hall of India Pvt.Ltd
4. Develop Your Idea!: Get Off to a Flying Start With Your Startup. Guided Exercises, Templates & Resources for Exploring New Business Ventures, K. N. Kukoyi
5. Managing Small Business by Longenecker, Moore, Petty and Palich, Cengage Learning, India Edition.
6. Entrepreneurship: New Venture Creation by David H. Holt
7. The Dynamics of Entrepreneurial Development & Management by Desai, Vasant , Himalaya Publishing House, Delhi
8. Entrepreneurship and Small Business Management by Siropolis
9. Lead like an Entrepreneur by Neal Thornberry

Suggested Reference Books:
1. Fundamentals of Entrepreneurship, Nandan H, PHI
2. Cases in Entrepreneurship by Morse and Mitchell, Sage South Asia Edition.
3. Entrepreneurship – Indian Cases on Change Agents by K Ramchandran, TMGH.
4. Entrepreneurship – The engine of growth, edited by Mark Rice and Timothy Habbershon, Published by Praeger Perspectives.
5. Entrepreneurship: Theory, Process and Practice by Kuratko, D.F. & Hodgetts, R.M. Thomson Press.

6. Entrepreneurship Development: Small Business Enterprises by Charantimath, P. , Pearson.
7. A Guide to Entrepreneurship by David, Otes , Jaico Books Publishing House, Delhi.
8. Indian Entrepreneurial Culture by A Gupta , New Age International.
9. Make The Move: Demystifying Entrepreneurship by Ishan Gupta, Rajat Khare

Semester II		216 - SPSS
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO216.1	REMEMBERING	IDENTIFY the key menus of SPSS and DESCRIBE their functionality.
CO216.2	UNDERSTANDING	EXPLAIN the main features of SPSS
CO216.3	APPLYING	MAKE USE OF various tools to manage date, describe data and display graphical output using SPSS.
CO216.4	ANALYSING	ANALYSE data using various statistical tests of SPSS
CO216.5	EVALUATING	INTERPRET and EXPLAIN the outputs from SPSS
CO216.6	CREATE	DESIGN, DEVELOP and TEST advanced multivariate models using SPSS.

1. **Overview**: SPSS Environment, Introduction to various menus, Data file, Output file, Frequently –used dialog boxes, Editing output, Printing results. Creating and editing a data file – Variable and data view, Value Labels.
2. **Managing Data:** Listing cases, replacing missing values, computing new variables, recording variables, exploring data, selecting cases, sorting cases, merging files, splitting files, Visual Binning. **Frequencies:** Frequencies, bar charts, histograms, percentiles. **Descriptive Statistics:** Measures of central tendency, variability, deviation from normality, size and stability. Cross Tabulation and chi-square analyses, The means Procedure. **Graphs:** Creating and editing graphs and charts
3. **Bivariate Correlation:** Bivariate Correlation, Partial Correlations and the correlation matrix. **The T-test Procedure:** Independent –samples, paired samples, and one sample tests. **Non Parametric Tests:** ChiSquareTest, 1 sample test, 2 independent samples test, k independent samples, 2 related samples test, k related samples.
4. **One Way ANOVA Procedure:** One way analysis of variance, General Linear model: Two –way analysis of variance, General Linear model: three –way analysis of variance and the influence of covariates
5. **Advanced Tools:** Simple Linear Regression , Multiple regression analysis. Multidimensional scaling, Reliability Analysis, Factor analysis, Cluster analysis.

Suggested Text Books:
1. Discovering Statistics Using SPSS, by Andy Field A, SAGE
2. How to Use SPSS: A Step-By-Step Guide to Analysis and Interpretation by Brian C. Cronk

Semester II		217 - Foreign Language II
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217.1	REMEMBERING	LISTEN to simple audio-visual recordings in the foreign language.
CO217.2	UNDERSTANDING	TRANSLATE simple letters from English to the foreign language and vice-versa.
CO217.3	APPLYING	CONSTRUCT a business email, in the foreign language.
CO217.4	ANALYSING	TAKE PART IN an interaction in a business setting using the foreign language.
CO217.5	EVALUATING	COMPOSE a covering letter and resume in the foreign language.

1. **Listening:** Understand Simple Questions and Instructions. **Reading:** Understand Single Words and Sentences but also Signposts, Signs and Posters. **Speaking:** Provide Short Information about the Job and the Person. **Writing:** Fill in Forms and Provide Information About Name, Address, Nationality etc. **(6)**

2. **Listening:** Understand Information about the Person and the Work. **Reading**: Understand Simple Letters, Appointments, Invitations and Information in Short Texts. **Speaking:** Answer Simple Questions About One's Working Field. **Writing:** Write Faxes and e-mails. **(6)**

3. **Listening:** Understand Standard Information Related to the Working Field. **Reading:** Understand Standard Letters and Texts about Working Processes and Product Descriptions. **Speaking:** Provide Information about the Job, the Departments, the Company, the Products and Processes in a Conversation or on the Phone. **Writing:** Answer Standard Inquiries, Make Quotations, Write Short Texts with a Familiar Content, Possibly Give Some Explanation and Answer Simple Questions. **(6)**

4. **Listening:** Understand Complex Information Related to the Working Field in Meetings, Discussions and at Presentations. **Reading:** Understand Reports and Contracts with a Company-related Content. **Speaking:** Describe and Explain Work Processes and Projects. Report on Meetings and Presentations. Explain Concepts and Clarify Misunderstandings. **Writing:** Write Formal Standard Letters and Texts about One's Field of Expertise. Explain a Graphic and Reflect the Content. **(6)**

5. **Grammar**: Future tense, imperfect tense, degrees of comparison, imperative mood. Script, Letters of alphabet, accents, sounds of groups of letters, punctuation marks, articles, nouns, sing./Pl , genders; mas. /fem. Structure of sentences & types like affirmative, negative interrogative & negative interrogative, Verbs: classes of verbs and conjugation patterns, Pronominal verbs; Present tense, The idea of auxiliary verb; prepositions; pronouns- subject, interrogative, relative, possessive, emphatic ; adjectives, adverbs. **(6)**

Note: Institute may offer any one of the following foreign languages to the students: SPANISH / FRENCH/ GERMAN/ JAPANESE / CHINESE

Suggested Text Books:
Relevant Standard Text Books, Videos, Audio CDs

Foundation Courses (Elective) - Semester I & II

Semester I		FOU – 001: Elementary English
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU001.1	REMEMBERING	LABEL the different parts of a sentence, correctly SPELL and PRONOUNCE the words in common usage and effectively LISTEN to short AV material (English).
CO-FOU 001.2	UNDERSTANDING	PARAPHRASE published written and audio visual content (English) in own words.
CO-FOU 001.3	APPLYING	CONSTRUCT short paragraphs and essays (English) for a specified task, to elicit, to select, to describe, to summarize information.
CO-FOU001.4	ANALYSING	TAKE PART IN conversations using general, social and professional (English) language.
CO-FOU001.5	EVALUATING	CHECK written and audio visual content (English) for grammatical correctness.
CO-FOU001.6	CREATING	SUBSTITUTE right words / terms / phrases in a compiled text.

1. **Fundamental grammatical structures and functions** - sentence types, tenses, voice, parts of speech, word order, expressing possibility, obligation, necessity, prohibition, criticism; expressing preferences, making assumptions; asking for/ refusing/giving permission; making offers, suggestions, punctuation, etc. **(3)**
2. **Building fundamental vocabulary** - to fulfill the above mentioned functions in roles, topics and discussions, synonyms, antonyms, homonyms, homophones, using dictionary, using thesaurus. **(3)**
3. **Listening** – short AVs in English, understanding the gist, the main points, look for detail or specific information, deduce the meaning. **(3)**
4. **Reading material** - reading various common place publications, using different strategies for different reading purposes, identifying the main points in a text, looking for detail, locating specific information in a text, understanding a text structure, right pronunciation, etc. **(3)**
5. **Conversation on different topics** - people, jobs, places to visit, festivals/celebrations, eating habits, attire, current affairs – popular personalities, disasters/accidents, politics, technology, sports/hobbies, environment, education, entertainment, transport, crime, etc. **(3)**

Suggested Text Books:
1. English Grammar and Composition, Wren & Martin, S. Chand Publishing
2. Word Power Made Easy, Norman Lewis

Semester I		FOU – 002: Elementary Mathematics and Statistics
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU002.1	REMEMBERING	MEMORIZE and REPRODUCE all basic formulae covered in the syllabus.
CO-FOU002.2	UNDERSTANDING	EXPRESS numbers in various forms such as fractions, percentages, equivalent simplest fractions.
CO-FOU002.3	APPLYING	CALCULATE Percentages, Profit & Loss, Simple & Compound Interest, frequency, cumulative frequency, basic areas and basic volumes.
CO-FOU002.4	ANALYSING	ILLUSTRATE relationships using direct and inverse proportion, simple graphs, linear and quadratic equations.
CO-FOU002.5	EVALUATING	INTERPRET basic statistical data, graphs, and venn diagrams.

| CO-FOU002.6 | CREATING | CREATING and SOLVING simple simultaneous equations. |

1. **Numbers:** Integers and fractions, squares, cubes, square roots and cube roots by prime factorization, negative numbers; Examples of very large and very small numbers such as million/billion/trillion, positive, negative, zero and fractional indices, laws of indices. **(1)**
2. **Preliminary Mathematics:** HCF & LCM, Ratio & Proportion, Problems based on Ages. **(2)**
3. **Ratio, rate and proportion:** Ratios involving rational numbers, writing a ratio in its simplest form, average rate, direct and inverse proportion, problems involving ratio, rate and proportion **(1)**
4. **Fractions & Percentages :** Expressing one quantity as a percentage of another, comparing two quantities by percentage, percentages greater than 100%, increasing/decreasing a quantity by a given percentage, reverse percentages, problems involving percentages **(1)**
5. **Mathematical Operations for Business:** Percentage, Profit & Loss, Simple & Compound Interest. **(1)**
6. **Time and Number related Mathematical operations:** Time & Work, Time, Speed & Distance, Number System, Permutation, and Series. **(2)**
7. **Basic Statistics:** Classification and tabulation of data, presentation of data, graphical presentation of data by frequency curve, frequency polygon, ogives, histogram. **(2)**
8. **Set Theory:** Basic concepts, Venn diagrams, interpretation. **(2)**
9. **Trigonometry :** Basic Trigonometry, Area and Volume. **(1)**
10. **Equations:** Simultaneous Equations, Quadratic Equations. **(2)**

References:
1. Rajagopalan and Sattanathan, Business Mathematics
2. Praveen, R. V., Quantitative Aptitude and Reasoning, PHI Learning
3. Goon Gupta and Das Gupta, Fundamentals of Statistics, Vol. 1, The World Press Pvt. Ltd., Kolkata.
4. Sharma, Arun, How to prepare for Quantitative Aptitude for the CAT, Tata McGraw Hill

Semester I		FOU – 003: Elementary Business Economics
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU003.1	REMEMBERING	ENUMERATE the basic terms covered in the syllabus.
CO-FOU003.2	UNDERSTANDING	INTERPRET the historical trends in key economic data from a managerial and business perspective.
CO-FOU003.3	APPLYING	MAKE USE OF key Government and Non-Government economic publications to gather insights from a managerial and business perspective.
CO-FOU003.4	ANALYSING	ILLUSTRATE broad inter-relationships between various economic parameters within the national context and global context.
CO-FOU003.5	EVALUATING	EXPLAIN the role and objectives of Monetary and Fiscal policy.
CO-FOU003.6	CREATING	HYPOTHESIZE the expected short term trends of key economic indices.

1. Concept of Economic Development, Concept of emerging, developed and developing economy, Concept of PPP **(1)**
2. Economic Map of the Globe, Economic map of India. **(1)**
3. Reserve Bank of India – composition, role, functions. **(1)**
4. Economic Survey of India - Role, Scope, Objectives, Sections, Key highlights of last Economic Survey. **(1)**
5. Union Budget - Role, Scope, Objectives, Sections, Key highlights of last Union Budget, Concept of Fiscal Deficit, Combined Fiscal Deficit. **(1)**
6. Monetary Policy – Concept, Frequency, MPC - Role, Scope, Objectives of Monetary Policy, Key highlights of last few Monetary Policy statements, impact – sentimental and material on economy. **(1)**
7. Key Economic Indicators – Inflation, IIP, GDP, CRR, Bank Rate, Exchange Rate, Unemployment rate, Ease of doing business index, etc. **(1)**
8. Inflation – Concept, CPI, WPI, Composition, Changes over time, Trends, Usage in policy making, Implications of high and low CPI, WPI. **(1)**

9. Exchange rates – Concept, USD – INR, Euro – INR, Yuan – INR, Renminbi – INR, Key trends and influencing factors. **(1)**
10. GDP – Composition, Trends. **(1)**
11. Key Stock Markets & Stock Indices – Sensex, Nifty, Sectoral Indices in India, Global Indices - European Indices, American Indices, Asian Indices. **(1)**
12. Commodity Markets – Crude, Precious Metals, Industrial Metals, Agro Commodities, MCX, NCDEX. **(1)**
13. Direct & Indirect Taxes – Concept of Direct Tax, Indirect Tax, Income Tax, Wealth Tax, GST. **(1)**
14. Key Sources of Data – Census, CSO, Niti Aayog, Different Ministries of Government of India, CRISIL, NCAER, Credit Rating Agencies. **(1)**
15. Introduction of G7, G 20, BRICS, ASEAN, SAARC, EuroZone, PIIGS, ADB, WB, etc. **(1)**

Suggested Text Books:
1. Indian Economy , Dutt R and Sundharam K.P.M, S .Chand, Delhi
2. Indian Economy, Agarwal A. N., Vikas Publishing House, Delhi
3. Indian Economy, Misra S.K. and Pury V.K., Himalaya Publishing House, New Delhi

Semester I		FOU – 004: Elementary Accounting
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU004.1	REMEMBERING	DESCRIBE the basic accounting terminologies and concepts covered in the course syllabus.
CO-FOU004.2	UNDERSTANDING	EXPLAIN the concepts covered in the course syllabus.
CO-FOU004.3	APPLYING	APPLY concepts covered in the course syllabus to accurately do the required calculations.
CO-FOU004.4	APPLYING	DETERMINE the key elements of business transactions and complete their accounting.
CO-FOU004.5	EVALUATING	DESIGN and OPERATE the entire accounting process (from entry to Balance - Sheet) for any given transaction.

1. **Basic Concepts and Terminologies** –Business Transaction, Meaning and Scope of Book Keeping and Accountancy, Importance of Book Keeping and Accountancy, Basic Terminologies related to Book Keeping and Accountancy, Classification of Accounts, Principle of Double Entry and Golden Rules of Accounting. (3+1)
2. **Journal Entries** – Preparation of Journal and passing journal entries (2+1)
3. **Ledger Posting & Balancing** – Preparation of Ledger Accounts, Posting the journal entries in the ledger accounts, Ledger Accounts Balancing and Interpretation of Ledger Account Balances. (2+1)
4. **Trial Balance** – Preparation of Trial Balance and Importance of Trial Balance in Accounting Process. (1+1)
5. **Final Accounts of Sole Proprietor** –Trading Account, Profit & Loss Account and Balance Sheet without adjustments. (2+1)

Suggested Text Books:
1. T.S. Grewal's Double Entry Book Keeping
2. Taxmann's Fundamentals of Accounting (CA CPT), CA D.G. Sharma
3. Book Keeping and Accountancy, Ainapure and Ainapure
4. Managerial Accounting, Dr. Mahesh Abale and Dr. Shriprakash Soni

Suggested Reference Books:
1. Financial Accounting for Management: Shankarnarayanan, Ramanath- CENGAGE Learning
2. Financial Accounting for Managers, Sanjay Dhmija, Pearson Publications
3. Accounting For Managemen, Jawahar Lal
4. Accounting, Shukla Grewal

Semester I		FOU – 005: Elementary Information Technology
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU005.1	REMEMBERING	DESCRIBE various components of a computer, network.
CO-FOU005.2	UNDERSTANDING	EXPLAIN the characteristics and usage of various elements of a computer, a network and operating systems.
CO-FOU005.3	APPLYING	USE various input, output, memory and local network devices.
CO-FOU005.4	ANALYSING	TEST and do basic troubleshooting of a standalone desktop or desktop connected to a network.
CO-FOU005.5	EVALUATING	EXPLAIN basic terminology related to data and information.
CO-FOU005.6	CREATING	DISCUSS emerging trends in IT.

1.   **Computer Basics:** Introduction, Evolution of Computers, Computer Generations, Classification of Computers, Computer Applications. Computer Organization, Memory and Storage **-** Basic Computer Organization (a) Input devices - keyboard, voice devices, scanner, MICR, OMR, Bar code reader, digital camera, etc. (b) Output devices - Visual Display Unit, printers, plotters, Audio Output, etc.(c) Memory or Storage Devices – Memory or Storage Unit - Physical Devices Used as Storage Cells, Random Access Memory, Read Only Memory, Secondary Storage, Compact Disk Read Only Memory, Flash Memory, Archival Storage, etc. (d) Central Processing Unit. Basic trouble shooting. Connecting a desktop, laptop to LCD, printer, etc. **(4)**

2.   **Computer Software:** Introduction, System Software, Application Software, Software Installing and Uninstalling, Booting, Software Development Steps, Programming Languages - Classification of Programming Languages. Operating System **-** Introduction, Role and functions of Operating System, Working Knowledge of GUI Based Operating System, Use of menus, tools and commands of windows operating system, File Handling and Management. **(4)**

3.   **Computer Networks:** Overview of Computer Network, Types of computer networks (LAN, WAN and MAN), Network topologies, Components of computer networks (servers, workstations, network interface cards, hub, switches, cables, etc.) Internet and its Tools - Introduction, Internet Evolution, Basic Internet Terminology, Data over Internet, Modes of Data Transmission, Types of Networks, Types of Topologies, Protocols used in the Internet, Getting Connected to Internet Applications, Internet Applications, Computer Ethics. **(3)**

4.   **Information Technology Basics:** Introduction, Data and Information, Types of Data, Need for Information Storage and Processing, **(2)**

5.   **Emerging Trends in IT:** Introduction, Electronic Commerce, Electronic Data Interchange, Smart Cards, Mobile Communications, Internet Protocol TV. **(2)**

Suggested Text Books:
1.   Computers Today, Basandra SK, Galgotia.
2.   Fundamentals of Information Technology, Leon, Vikas
3.   Information Technology: Inside and outside, Cyganski, Pearson
4.   Computer Applications in Management, Kakkar DN, Goyal R, New Age
5.   Information Technology for Management, B Muthukumaran, Oxford University Press

Semester I		FOU – 006: Elementary Business Etiquette
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU006.1	REMEMBERING	DEFINE terms and concepts used to describe appropriate business etiquette attitudes and behaviors.
CO-FOU006.2	UNDERSTANDING	EXPLAIN what is meant by business etiquette and how it impacts the workplace.
CO-FOU006.3	APPLYING	DEMONSTRATE appropriate behaviors within specific business situations.

CO-FOU006.4	ANALYSING	TAKE PART IN professional business meetings and real & virtual business conversations.
CO-FOU006.5	EVALUATING	DETERMINE the right attire for business, casual and multicultural events.
CO-FOU006.6	CREATING	PLAN a professional business meeting and a business meal.

1.   **Professionalism at Work:** Making a good first impression, understanding the mechanics of human perception, being aware of elements in image building, developing a culture of excellence, basic understanding of acceptable attitudes and mannerisms at work, the role of Good Manners in Business? Disability Etiquette - Basic disability Etiquette practices, Courtesies for wheelchair users, Courtesies for blind or visually impaired, Courtesies for the deaf, People with speech impairments. Multi-cultural challenges, Multi-cultural etiquette, Cultural differences and their effect on business etiquette, Select Cultural Highlights **(5)**

2.   **Body Language at Work:** Non verbal communication, the 'smile' factor, building posture, facial expressions and eye contact, gestures for effective communication. **(3)**

3.   **Business Etiquette Basics:** Introduction to business etiquette - The ABCs of etiquette Meeting and greeting scenarios, Enduring Words, Making introductions and greeting people, Greeting Components, The protocol of shaking hands, Introductions, Introductory scenarios, Addressing individuals, Networking for business, Business card protocol, Managing your business voice, Speaking Diplomatically, Managing Question and Answer Sessions Effectively **-** Anticipatory Q & A, Dealing with hostile questions, Reframing principles, Case Studies and Practice, Cell phone Etiquette, Voice Mail Etiquette**,** Internet & email etiquette, Internet usage in the workplace, Email, Netiquette, Online chat, Online chat etiquette, Online chat etiquette guidelines. **(5)**

4.   **Dining Etiquette**: Planning a meal, issuing invitations, How to proceed through a receiving line, seating guidelines, navigating a place setting, appropriate table manners. **(1)**

5.   **Business Attire & Professionalism:** Dressing sense, selecting the right clothing for a business wardrobe, Business style and professional image, Dress code, Guidelines for appropriate business attire, Grooming for success, Guidelines for appropriate business attire, Multicultural dressing, Making-up basics. **(1)**

Suggested Text books:
1.   The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success, Barbara Pachter
2.   Modern Manners: Tools to Take You to the Top, Dorothea Johnson and Liv Tyle
3.   Business Etiquette: 101 Ways to Conduct Business with Charm and Savvy, Ann Sabath
4.   Indian Business Etiquette, Raghu Palat, Jaico Publishing
5.   Business Etiquette: A Guide for the Indian Professional, Shital Kakkar Mehra

Semester II		FOU – 007: Elementary MS Word
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU007.1	REMEMBERING	SHOW basic menus of MS WORD on the screen and RECALL the functionality.
CO-FOU007.2	UNDERSTANDING	DEMONSTRATE the use of formatting, layout and printing tools of MS Word to create professional word documents.
CO-FOU007.3	APPLYING	APPLY the viewing, referencing tools of MS Word.
CO-FOU007.4	ANALYSING	ILLUSTRATE the use of reviewing tools for collaborative MS word documents.
CO-FOU007.5	EVALUATING	DESIGN and execute Mail merged documents.
CO-FOU007.6	CREATING	COMPILE a professional report using templates, Tables, Table of contents, referencing, headers, footers and page numbers.

1.   Introduction to MS WORD, The Screen and its Elements, The Office Button, Quick Access, The View Buttons, Print Layout, Full Screen Reading, Web Layout, Outline , Draft, Zoom, The Status Bar, Creating a New Document, Starting on a New Blank Document, Templates, Writing and Simple Formatting - Simple formatting, Formatting with Styles, Customising Styles. **(3)**

2. Pictures and Graphics, Pictures, Insert a Picture from a File, Adjusting Picture Size, Positioning and Text Wrapping, Captions, Cross-References to Characters, Pictures and Headlines, Clip Art, SmartArt, Excel Charts, Create a New Excel Chart in Word, Insert a Chart from an Excel Project File, Tables Tools, Illustrations, Equations, Symbols. **(3)**

3. Tables of contents and other references - Create a table of contents, Edit a citation placeholder, Create a bibliography, Foot note & End Note, Captions & Index, Mail Merge – Preparation, Retrieving Merge Data, Complete the Merge. **(3)**

4. Page Layout, Margins, Adjusting the Margins, Page Setup, Setting Page Size, Orientation, Columns, Sections, Page Header and Footer, Tabs (tabulators), Page Numbers, Links, Page breaks and section breaks, Applying Multiple headers, Checking Spelling, grammar, and thesaurus. **(3)**

5. Collaboration - Protect your document with passwords, permission, and other restrictions, Tracking changes and comments - Turn track changes on or off, Review tracked changes and comments. **(3)**

Suggested Text Books:
1. Microsoft Word 2016 Step by Step, Joan Preppernau
2. Microsoft Word 2016 Introduction Quick Reference Guide - Windows Version (Cheat Sheet of Instructions, Tips and Shortcuts, Lamina

Semester II		FOU – 008: Elementary MS Powerpoint
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU008.1	REMEMBERING	SHOW basic menus of MS Powerpoint on the screen and RECALL the functionality.
CO-FOU008.2	UNDERSTANDING	DEMONSTRATE the use slide management, slide layout and reviewing tools of MS Powerpoint to create professional presentations.
CO-FOU008.3	APPLYING	USE tables, charts, smart art, animation and references in a powerpoint presentation.
CO-FOU008.4	ANALYSING	ILLUSRATE the various modes of delivery of the final powerpoint presentation.
CO-FOU008.5	EVALUATING	DEVELOP custom themes and customize slide masters and layouts.
CO- FOU008.6	CREATING	COMPILE a professional powerpoint presentation using templates, tables, images, hyperlinks, animation, templates, headers, footers and slide numbers, etc.

1. **Get started with PowerPoint:** PowerPoint basics, Start PowerPoint, Work in the PowerPoint user interface, Create and manage presentations, Open and navigate presentations , Display different views of presentations, Change the display of content, Display and edit presentation properties, Save and close presentations, Compatibility with earlier versions, Create and manage slides , Add and remove slides, Insert new slides , Copy and import slides and content, Hide and delete slides, Divide presentations into sections, Rearrange slides and sections, Apply themes, Change slide backgrounds. **(4)**

2. **Editing and Managing Text:** Insert and manage slide text, Enter and edit text, Insert nonstandard characters, Add supplementary text to slides, Insert equations, Add a slide footer, Move, copy, and delete text, Format text placeholders, Format characters and paragraphs, Apply WordArt text effects, Configure AutoCorrect options, Check spelling and choose the best wording, Find and replace text and fonts. **(5)**

3. **Tables, Shapes and Charts:** Present text in tables, Insert tables, Format tables, Modify table structure, Embed and link to Excel content, Insert and manage visual elements, Insert and manage simple graphics, Insert, move, resize, edit and format pictures, Draw and modify shapes, Draw and add text to shapes, Locate additional formatting commands, Move and modify shapes, Format shapes, Connect shapes, Capture and insert screen clippings, Create a photo album. Create and manage business graphics, Create diagrams, Sidebar: Picture diagrams Modify diagrams, Format diagrams, Create charts, Modify charts, Manage chart data, Modify the display of chart elements, Pie charts, Format charts, and Custom chart templates. **(6)**

4.	**Animation:** Add sound and movement to slides Animate text and pictures on slides, Customize animation effects , Bookmark points of interest in media clips, Add audio content to slides, Add video content to slides, Compress media to decrease file size, Hyperlink to additional resources, Add and manage slide transitions. **(5)**

5.	**Finalize presentations:** Create custom presentation elements, Create custom themes, Customize slide masters and layouts, Save custom presentation templates, Save and share presentations, Save presentations in other formats, Share presentations from PowerPoint, Restrict access by using passwords, Add and review comments, Coauthor presentations. Review presentations , Add notes, Configure slides for presentation or printing , Inspect and finalize presentations, Print presentations and handouts, Prepare and deliver presentations, Adapt presentations for different audiences, Rehearse a presentation and set slide timings, Prepare presentations for travel, Present slide shows, Start the slide show, Use the slide show tools. **(5)**

Suggested Text Books:
1.	Microsoft PowerPoint 2016 Step by Step, Joan Lambert
2.	Microsoft PowerPoint 2016 Made Easy: A Step-by-Step Guide for PC Users, Dr. Harold Lloyd Fisher Jr., Kymitra L. Fisher (Editor)
3.	Exploring Microsoft PowerPoint 2016 Comprehensive , Mary Anne Poatsy, Rebecca Lawson, Cynthia Krebs, Robert T. Grauer

Semester II		FOU – 009: Data Interpretation and Logical Reasoning
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU009.1	REMEMBERING	RECOGNIZE when additional information is needed to solve problems.
CO-FOU009.2	UNDERSTANDING	EXPRESS quantitative and non-quantitative data, associations and linkages in a logical format.
CO-FOU009.3	APPLYING	USE statistical information when reported in condensed form or as summary statistics to make informed decisions.
CO-FOU009.4	ANALYSING	DISSECT arguments, SEQUENCE relationships, EXAMINE assumptions, DETECT fallacies and INFERENCE from the same.
CO-FOU009.5	EVALUATING	ESTIMATE and CHECK answers to logical and data sufficiency problems in order to determine reasonableness, identify alternatives, and select correct options.
CO-FOU009.6	CREATING	DEVELOP and EVALUATE inferences and predictions based on the data and information provided.

Data Interpretation
1.	Tables
2.	Pie Charts
3.	Caselets
4.	Bars
5.	Line Graphs
6.	Data Sufficiency

Logical Reasoning
1.	Blood Relations
2.	Direction Sense
3.	Puzzles
4.	Data Arrangement, Seating Arrangement
5.	Data Structures
6.	Series
7.	Coding-Decoding
8.	Clocks and Calendars
9.	Family Tree

10. Venn Diagram
11. Syllogism
12. Proposition, Assumptions
13. Statements
14. Binary Logic
15. Sets

Suggested Text Books:
1. How to Prepare for Data Interpretation, Arun Sharma, Tata Mc Graw Hill
2. Puzzles to Puzzle you, Shakuntala Devi
3. Quantitative Aptitude, Abhijeet Guha, Tata Mc Graw Hill
4. Quantitative Aptitude, Agarwal R S, S Chand
5. Data Interpretation & Data Sufficiency, Ananta Ashisha
6. The Great Book of Puzzles & Teasers, George J Summers
7. Magical Book Series: Data Interpretation, K. Kundan
8. A Modern Approach to Verbal Reasoning, R.S. Aggarwal

Semester II		FOU – 010: Verbal Ability & Reading Comprehension
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU010.1	REMEMBERING	IDENTIFY parts of speech
CO-FOU010.2	UNDERSTANDING	SUMMARIZE a given text material in defined word limits.
CO-FOU010.3	APPLYING	MAKE USE OF foreign words in English Language, idioms and phrases.
CO-FOU010.4	ANALYSING	EXAMINE given text sentences and paragraphs for errors and correct them.
CO-FOU010.5	EVALUATING	SELECT the appropriate words in a given context.
CO-FOU010.6	CREATING	CONSTRUCT meaningful sentences and COMPOSE meaningful paragraphs from jumbled ones.

Verbal Ability and Reading Comprehension
1. Grammar, Parts of Speech, Articles. Nouns, Verbs, Adjectives, Pronouns, Conjunctions, Prepositions, Adverbs.
2. Clauses, Tenses, Subject & Verb Agreement, Question Tags
3. Analogies
4. Idioms & Phrases
5. Synonyms, Antonyms,
6. Homonyms, Homophones
7. One word substitution
8. Root words, origins of words, prefixes, suffixes,
9. Foreign language words used in English
10. Contextual usage, Different usage of same word
11. Spotting Errors, Error Correction
12. Fill in the blanks, Sentence correction, Sentence completion
13. Jumbled paragraphs, Para Completion and inference
14. Reading Comprehension
15. Verbal Logic, Verbal Reasoning, Syllogisms

Suggested Text Books:
1. How to Prepare for Verbal Ability and Reading Comprehension for CAT, Arun Sharma and Meenakshi Upadhyay/Arihant
2. 30 Days to a More Powerful Vocabulary, Wilfred Funk & Norman Lewis/ Simon & Schuster
3. How to Prepare for Verbal Ability and Reading Comprehension for the CAT, Sharma and Upadhyay
4. Puzzles to Puzzle you, Shakuntala Devi

5. A Modern Approach to Verbal Reasoning, R.S. Aggarwal
6. Competition Success Review

Semester II		FOU – 011: Quantitative Ability
1 Credit	LTP: 0:2:0	Foundation Course (Elective)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO-FOU011.1	REMEMBERING	RECALL the formulas.
CO-FOU011.2	UNDERSTANDING	INTERPRET quantitative information and INFER from it.
CO-FOU011.3	APPLYING	DEMONSTRATE number sense, including dimensional analysis and conversions between fractions, decimals, and percentages.
CO-FOU011.4	ANALYSING	EXAMINE the validity and DETECT possible biases in arguments presented in quantitative forms.
CO-FOU011.5	EVALUATING	DETERMINE when approximations are appropriate and when exact calculations are necessary.
CO-FOU011.6	CREATING	FORMULATE the problem quantitatively and USE appropriate arithmetical, and/or statistical methods to SOLVE the problems.

Quantitative Aptitude
1. Geometry
2. Trigonometry
3. Mensuration
4. Ratios and Proportion
5. Number system
6. Work and time
7. HCF & LCM
8. Algebra
9. Profit & Loss
10. Quadratic and linear equations
11. Geometric Progression
12. Percentages
13. Averages
14. Partnership (Accounts)
15. Time-Speed-Distance
16. Surds and Indices
17. Inequalities
18. Logarithms

Suggested Text Books:
1. Shakuntala Devi, Puzzles to Puzzle you
2. Quantitative Aptitude, Abhijeet Guha, Tata Mc Graw Hill
3. Quantitative Aptitude, Agarwal R S, S Chand
4. Data Interpretation & Logical Reasoning, Gautam Puri
5. Logical Reasoning and Data Interpretation, Nishit K. Sinha
6. Data Interpretation & Data Sufficiency, Ananta Ashisha

Subject Core (SC) Courses - Semester II		
Specialization: Marketing Management		

Semester II		205MKT: Marketing Research
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO205MKT.1	REMEMBERING	IDENTIFY and DESCRIBE the key steps involved in the marketing research process.
CO205MKT.2	UNDERSTANDING	COMPARE and CONTRAST various research designs, data sources, data collection instruments, sampling methods and analytical tools and SUMMARIZE their strengths & weaknesses.
CO205MKT.3	APPLYING	DEMONSTRATE an understanding of the ethical framework that market research needs to operate within.
CO205MKT.4	ANALYSING	ANALYSE quantitative data and draw appropriate Inferences to address a real life marketing issue.
CO205MKT.5	EVALUATING	DESIGN a market research proposal for a real life marketing research problem and EVALUATE a market research proposal.
CO205MKT.6	CREATING	PLAN and UNDERTAKE qualitative or quantitative Market Research and demonstrate the ability to appropriately analyse data to resolve a real life marketing issue.

1.   **Introduction to Marketing Research:** Definitions - Marketing Research, Market Research, Scope and Limitations of Marketing Research, Role of Information in Marketing Decisions, Value and Cost of Information, Marketing Information System and Marketing Research, Marketing Decision Support System, Threats to Marketing Research, Relationship between Marketing Research & Marketing, Organizing Marketing Research function, Evaluating utility of Marketing Research, Online Marketing Research, Recent Trends in Marketing Research, Marketing Research Industry in India. **(3+1)**

2.   **Marketing Research Proposal:** The marketing research brief, The Marketing decision problem and marketing research problem, Defining the marketing research problem, developing the research approach, The decision maker & the environment, alternative courses of action, objectives of decision maker, consequences of alternative courses of action, Translating decision problem to research problem, The marketing research proposal **(**Background - basic problem/opportunity , Objectives , Research Design – Qualitative & Quantitative approaches, Data Requirements, Data collection methods, Data collection instruments, Population definition, Sample Plan, Sample size, Sampling Methodology, Statistical analysis, Cost Estimates, Time line, Appendices), Report Writing, Ethical Issues in Marketing Research – participant issues, sponsor issues, corporate espionage, code of ethics. **(5+1)**

3.   **Advanced Analytical Tools:**

(a)   **Conjoint Analysis:** Conceptual basis, procedure, type of data required, key decision, how to interpret output, applications to study trade off patterns of consumers as related to different levels of marketing mix elements (Question on interpretation of output is expected)

(b)   **Factor Analysis:** Conceptual basis, type of data required, procedure, PCA, Interpreting factor matrix (factor loadings, communalities, Eigen value), determining number of factors using latent root criteria & scree test, interpreting & naming factors, applications in consumer behavior studies (interpretation of output is expected)

(c)   **Cluster Analysis:** Conceptual basis, type of data required, procedure, clustering methods – single linkage rule, how to interpret output, applications related to psychographic & lifestyle market segmentation (interpretation of output is expected)

(d)   **Multi- dimensional Scaling & Perceptual Mapping:** Conceptual basis, type of data required, key decision-attribute based versus non-attribute based approaches, procedure, how to interpret output, applications related to target market selection & positioning (interpretation of output is expected)

(e)   **Discriminant Analysis (Two Group Case):** Conceptual basis, type of data required, determining the coefficients, interpreting discriminant function & classifying subjects using discriminant function, applications in marketing (interpretation of output is expected) **(10+2)**

4.   **Marketing Research Applications - I:**

(a)   **Sales Analysis and Forecasting:** Mining internal customer and sales data, In-store shopper marketing research and Retail shop audits, margin trend data, targeting best customers, identifying most efficient and effective advertising and promotion methods to reach existing consumers, Consumer panels, Customer satisfaction research, Concept of Market demand and Market potential, Forecasting, Forecasting methods, Choosing a forecast model, forecast errors. Moving Average and Exponential Methods, Decomposition Methods, Regression Models.

(b)   **New Product Development and Test Marketing:** marketing information for new markets, new product categories, new product concepts, new product design and market validation research, test marketing – uses, types, methods, limitations. Conjoint analysis for understanding consumer preferences and application to product design.

(c)   **Market Segmentation and Positioning:** researching traditional market segments, defining meaningful segments, assessing existing product strength and line extension potential, creative positioning strategy, repositioning strategy research, defining go-to-market strategy, current and potential markets. **Use of Factor analysis and perceptual maps**.

(d)   **Pricing research:** Pricing research and pricing strategy decisions, optimum price-product-feature configurations and market positioning opportunities. **(10+2)**

5.   **Marketing Research Applications - II:**

(a)   **Brand Research:** brand concepts, brand names, brand power research, brand equity survey measurements, Brand tracking studies.

(b)   **Advertising Research:** Concept testing research – evaluating advertising concepts, ad theme concepts and appeals, ad recall surveys, message and theme salience, impact measures, buying motivation and association measures, media research like readership surveys, Media audience tracking studies, TRP, Limitations of advertising research.

(c)   **International Marketing Research:** Marketing research in international context - importance, complexities and issues, International secondary data sources, Primary data collection methods and complexities of data collection in international marketing research, Online data sources and research, Issues in multi-country data analysis - Data comparability and validity problems, major sources of errors, Report preparation and presentation.**(9+2)**

Suggested Text Books:
1.   Marketing Research, G C Beri, TMGH
2.   Marketing Research   - An Applied Orientation, Malhotra and Dash, Pearson Education.
3.   Marketing Research, Churchill, Jr, G.A. and D. Iacobucci, South Western: Thomson.
4.   Marketing Research, Zikmund, Babin, Cengage Learning
5.   Marketing Research, Boyd, H.P., R. Westfall and S. F. Stasch, Delhi: A.I.T.B.S.
6.   Marketing Research, Burns, G.A. and D. Bush, South Western: Thomson.

Suggested Text Books:
1.   Marketing Research, Green, P.E., Tull, D.S. and G. Albaum, New Delhi: Prentice Hall of India.
2.   Marketing Research, Suja Nair
3.   Marketing Research, Luck, D.J. and R.S. Rubin, New Delhi: Prentice Hall of India.
4.   Marketing Research, Tull, D.S. and D.I. Hawkins,New Delhi: Prentice Hall of India.

Semester II		206MKT: Consumer Behavior
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO206MKT.1	REMEMBERING	ENUMERATE social and psychological factors and their influence his/her behavior as a consumer.
CO206MKT.2	UNDERSTANDING	EXPLAIN fundamental concepts associated with consumer and organizational buying behavior.
CO206MKT.3	APPLYING	APPLY consumer behavior concepts to real world strategic marketing management decision making.
CO206MKT.4	ANALYSING	ANALYSE the dynamics of human behavior and the basic factors that influence the consumer's decision process.
CO206MKT.5	EVALUATING	EXPLAIN the consumer and organizational buying behavior process for a variety of products (goods/services).

CO206MKT.6	CREATING	DISCUSS the use of the Internet, e-commerce & information technology with respect to the changing consumer marketplace and ELABORATE on the various aspects of the changing Indian Consumer.

1. **Introduction to Consumer Behavior**: Definition, Consumer and Customers, Buyers and Users, Organizations as Buyers, Use of Market Segmentation in Consumer Behavior, Dimensions of Consumerism, The Changing Patterns of Consumer Behavior in the context of the evolving Indian Economy, The Internet, e-commerce, and information technology and the changing consumer marketplace, Consumer Behavior and its Applications in Marketing. **(4+1)**

2. **Individual Determinants of Consumer Behavior:**

(a) **Consumer Personality –** Personality, Self-concept, Overview of Personality Theories, Brand Personality, Emotions.

(b) **Consumer Perception -** Sensation (Exposure to Stimuli), Perceptual Selection, Perceptual Organization, Factors that Distort Individual Perception, Price Perceptions, Perceived Product and Service Quality, Consumer Risk Perceptions.

(c) **Consumer Learning, Memory and Involvement -** Components of Learning, Behavioral Theory, Cognitive Learning Theory, Memory System, Memory Process, Concept of Involvement, Dimensions of Involvement, Involvement and Types of Consumer Behavior, Cognitive Response Model, Elaboration Likelihood Model, Social Judgment Theory, Brand Loyalty and Brand Equity.

(d) **Consumer Attitudes -** Functions of Attitude, Attitude Models, Relationship between Attitude, Beliefs, Feelings and Behavior, Learning Attitudes, Changing Attitudes, Attitude Change Strategies for marketers.

(e) **Consumer Motivation** - Needs and Goals, Motivational Conflict, Defense Mechanisms, Motive Arousal, Motivational Theories, Overview of Maslow's hierarchy of needs.**(11+1)**

3. **Environmental Influences on Consumer Behavior:**

(a) **Cultural Influences on Consumer Behavior –** Concept of Culture, Values, Sub-cultures, Influence of Indian Culture on Consumers, Multiplicity of Indian Cultures and their influence on consumer behavior, Cross-cultural Influences.

(b) **Social Class and Group Influences on Consumer Behavior -** Concept of Social Class, Social Sub-Class, Money and Other Status Symbols, AIO classification of Lifestyle, VALS Typology, Source of Group Influences, Types & Nature of Reference Groups, Reference Group Influences and Applications, Group Norms and Behavior, Family Life Cycle Stages, Family Purchases, Family Decision-making, Purchasing Roles within family, Word-of-Mouth Communications within Groups, Opinion Leadership.

(c) **Indian Consumer:** Social classes in India - old and new Socio-Economic Classes (SEC) in Urban & Rural Markets, Characteristics of BoP Consumers, Gen Z Consumers, HNI Consumers in India.

(d) **Diffusion of Innovation -** Types of Innovation, Diffusion Process, Factors Affecting the Diffusion of Innovation, The Adoption Process, Time Factor in Diffusion Process, Culture, Communication and Diffusion**. (11+1)**

4. **Consumer Decision Making Process:**

(a) **Problem Recognition -** Types of consumer decisions, types of Problem Recognition, Utilizing problem recognition information

(b) **Search & Evaluation -** Types of information, Sources of Information Search, Search, Experience and Credence Aspects -Marketing Implications, Situational Influences on Purchase Decisions, Nature of Situational Influence, Situational Variables

(c) **Purchasing Process -** Why do people shop? Store & Non-store Purchasing Processes, Purchasing Patterns

(d) **Post-purchase Evaluation & Behavior -** Consumer Satisfaction, Dissatisfaction, Customer Delight, Consumer Complaint Behavior, Post- Purchase Dissonance.

(e) **Consumer Decision Models -** Types of Consumer Decisions, Nicosia Model of Consumer Decision-making, Howard-Sheth Model, Engel, Blackwell, Miniard Model **(11+1)**

5. **Organizational Buying Behavior:** Introduction, Organizational Buyer Characteristics, Purchase and Demand Patterns, Factors Influencing Organizational Buyer Behavior, organizational Buyer Decision Process, Organizational Buying Roles.**(3+1)**

Note: Live examples and cases to be discussed.

Suggested Text Books:
1. Consumer Behavior, David L. Loudon & Albert J. Della Bitta, Tata McGraw Hill, 4th Edition
2. Consumer Behavior, Hawkins, Mothersbaugh, Tata McGraw Hill
3. Consumer Behavior, Batra, Kazmi, Excel Books
4. Consumer Behavior, Leon Schiffman, Leslie Kanuk, S.Ramesh Kumar, Pearson, 10th Edition

5.   Consumer Behavior, Engel, Blackwell & Miniard
6.   Consumer Behavior - An Indian perspective, Dr. S.L Gupta, Sumitra Pal, Sultan Chand and Sons
7.   Consumer Behavior - In Indian Perspective, Suja R. Nair, Himalaya Publishing House.
8.   Why we Buy: The Science of Shopping, Paco Underhill, Simon and Schuster Paperbacks.

Suggested Reference Books:
1.   We are like that only by Rama Bijapurkar, Penguin
2.   The Marketing White Book, Business World
3.   Economic Times, Business Standard, Mint, Business world.(Brand equity & Brand wagon)

Subject Elective (SE) Courses - Semester II
Specialization: Marketing Management

Semester II		217MKT: Integrated Marketing Communications
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217MKT.1	REMEMBERING	DESCRIBE the IMC mix and the IMC planning process.
CO217MKT.2	UNDERSTANDING	EXAMINE the role of integrated marketing communications in building brand identity, brand equity, and customer franchise.
CO217MKT.3	APPLYING	CONSTRUCT a marketing communications mix to achieve the communications and behavioural objectives of the IMC campaign plan.
CO217MKT.4	ANALYSING	ANALYZE and critically evaluate the communications effects and results of an IMC campaign to determine its success for a variety of brands.
CO217MKT.5	EVALUATING	DESIGN a sales promotion campaign and CHOOSE the avenues for Public Relations, Publicity and Corporate Advertising for a consumer and a business-to-business product.
CO217MKT.6	CREATING	DEVELOP an integrated cross-media strategy and creative message and concept to reach the target audience and deliver the brand promise through an IMC campaign for a variety of brands.

1. **Integrated Marketing Communication:** Integrated Marketing Communication, Evolution of Integrated Marketing Communication, Role of IMC in creating brand identity, brand equity, and customer franchise, Communication Process, Promotional Mix: Tools for IMC, The IMC Planning Process, Global IMC. The Value of IMC plans – information technology, changes in channel power, increase in competition, brand parity, integration of information, decline in the effectiveness of mass-media advertising. **(3)**

2. **Advertising- I:**
(a)   Definition, History, Roles and Functions of Advertising, Types of Advertising, Steps in Development of Advertisement.
(b)   **Advertising Design:** Appeals, Message Strategies & Execution Framework: Advertising Design, Advertising Theory, Types of Advertising Appeals, Structure of an Advertisement, Message Strategies, Cognitive strategies, Execution Strategies, Creating an Advertising, Advertising Effectiveness.
(c)   **Copywriting:** Meaning and Definition of Copywriting, The Copywriter, Copywriting for Print, Copywriting guidelines, Radio Copywriting, TV Copywriting, Writing for the Web, Tips for writing good web content. **(10)**

3. **Advertising- II:**
(a)   **Media Planning and Strategies:** Growth and Importance of Media, Meaning and Role of Media Planning, Media Plan, Market Analysis, Media Objectives, Developing and Implementing Media Strategies, Evaluating the effectiveness.
(b)   **Print Media and Outdoor media:** Characteristics of the press, Basic media concepts, Newspapers, Magazines, Factors to consider for magazine advertising, Packaging, Out-of-home Advertising, Directory Advertising.
(c)   **Broadcast and Internet Media:** Meaning of Broadcast Media, Radio as Medium, Television as Medium, Internet Advertising, Email Advertising. **(10)**

4. **Sales Promotion:** Scope and Role of Sales Promotion, Growth of Sales Promotion, Consumer Oriented Sales Promotion, Techniques in Sales Promotion, Trade Oriented Sales Promotion, Coordinating sales promotion and advertising; Sales promotion abuse; Personal selling. **(4)**

5. **Public Relations, Publicity and Corporate Advertising:** Definition of Public Relations, Publicity and Corporate Advertising; Difference between public relations and advertising, Functions of Public Relations; Creating positive image building activities; Preventing or reducing image damage; Sponsorship and Event marketing; Role of internet in Public Relations, Publicity, Advantages and Disadvantages of Publicity. **(3)**

Suggested Text Books:
1.   Advertising and Promotion, Belch, George and Belch, Michael, Tata McGraw Hill, New Delhi.

2. Integrated Advertising, Promotion and Marketing Communication, Clow, Kenneth & Black, Donald, Pearson Education, New Delhi.
3. Advertising Management, Jethwaney, Jaishree and Jain, Shruti, Oxford University Press, New Delhi.
4. Advertising and Promotions, Semenik Allen, Cengage Leaning
5. Advertising and Promotion, SHH Kazmi, SatishBatra, Excel Books
6. Advertising and Promotions, Shah, D'Souza, Tata McGraw Hill

Suggested Reference Books:
1. Integrated Marketing Communication, Tom Duncan, McGraw-Hill
2. Integrated Marketing Communication: Trends and Innovations, Shridha Jain, Global India Publications
3. IMC, The Next Generation, Don Schultz and Heidi Schultz, Tata McGraw Hill, New Delhi.

Semester II		218MKT: Product and Brand Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO218MKT.1	REMEMBERING	DEFINE the key concepts and DESCRIBE the elements of a product strategy.
CO218MKT.2	UNDERSTANDING	EXPLAIN the process and methods of brand management, including how to establish brand identity and build brand equity.
CO218MKT.3	APPLYING	IDENTIFY the Brand Marketing Strategies for Leaders, Challengers, Followers and Niche Strategies for real life consumer, business products and services operating in various markets and in the digital space.
CO218MKT.4	ANALYSING	EXAMINE the key brand concepts by articulating the context of and the rationale of application for real life consumer, business products and services operating in various markets and in the digital space.
CO218MKT.5	EVALUATING	FORMULATE effective branding strategies for real life consumer, business products and services operating in various markets and in the digital space.
CO218MKT.6	CREATING	COLLECT brand audit data using appropriate tools and PROPOSE strategic recommendations for Reinforcing / Revitalizing / Rejuvenating failed Brands for real life consumer, business products and services in various markets and in the digital space.

1. **Product Management:** Product management as a basis of marketing organization structure. Role of product manager, Product management in consumer product industry Vs. industrial product industry. Overview of product level marketing plans. **(5)**
2. **Product Strategy:** Elements of a product strategy, Defining Competitive set, Category Attractiveness Analysis, Competitor Analysis, Customer Analysis, setting objectives, selection of strategic alternatives – increasing sales, market share, profitability, New product failure. **(5)**
3. **Brand Management and Brand Equity:** Definition of brand, Challenges in Branding Strategic brand management process, Brand Equity Models- Brand Asset Valuation, Aaker Model, BRANDZ ,Brand Resonance, Customer based Brand equity, Brand knowledge, Sources of brand equity - Brand Awareness, Brand Image. **(7)**
4. **Planning and Implementing Brand Marketing Programs:** The Four steps of brand building, creating customer value, Identifying and establishing brand positioning, Positioning guidelines, Choosing brand elements to build brand equity, Options and tactics for Brand, New perspectives on marketing, Integrating marketing communication to build brand equity, Conceptualizing the leveraging process, Co- branding, Celebrity Endorsement. Brand Marketing Strategies for Leaders, Challengers, Followers, Niche Strategies. **(7)**
5. **Growing and Sustaining Brand Equity:** The brand value chain, Brand audit, Designing brand tracking studies, Capturing customer mind set through quantitative and qualitative research techniques, Brand architecture, Brand hierarchy, Designing brand strategy, New products, Brand extensions- advantage and disadvantage, Reinforcing brands, Revitalizing brands, Rejuvenating failed Brands. **(6)**

Suggested Text Books:
1. Product Management, Lehmann & Winer, TMGH
2. Product Management, S. A. Chunawalla, Himalaya Publishing House
3. Strategic Brand Management, Kevin Lane Keller, Pearson
4. Strategic Brand Management, J N Kapferer, Kogan Page
5. Brand Management, Dr. S.L.Gupta Himalaya Publishing House

Suggested Reference Books:
1. Product Management, Dr. C. Anandan, TMGH
2. Product & Brand Management, U.C. Mathur, Excel books
3. Building Brand Equity, David Aaker
4. Branding Concepts & Process, Debashish Pati
5. Brand Positioning Strategies for Competitive Advantage, Subrato Sen Gupta

Semester II		219MKT: Personal Selling Lab
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219MKT.1	REMEMBERING	LIST the key terms in selling and DESCRIBE the qualities of Winning Sales Professionals
CO219MKT.2	UNDERSTANDING	EXPLAIN the theories and concepts that are central to personal selling.
CO219MKT.3	APPLYING	Apply the interpersonal and team skills necessary in successful relationship selling.
CO219MKT.4	ANALYSING	ILLUSTRATE the use of various sales techniques needed to achieve a profitable sale in a real world scenario for a real world product/ service / e-product / e-service.
CO219MKT.5	EVALUATING	DEVELOP a customer plan that identifies all elements of personal selling, essential to creating successful sales in a real world scenario for a real world product/ service / e-product / e-service.
CO219MKT.6	CREATING	CREATE sales presentation for a real world product/ service / e-product / e-service and for variety of selling situations.

1.   Personal Selling & Salesmanship: Defining Personal selling and salesmanship, Selling as a profession, Objectives and importance of personal selling, Essentials of Personal Selling, Traditional & Modern Selling Approach, Ethical and Legal Considerations in Personal Selling, Role of Selling in Marketing, Types of selling, Qualities of Winning Sales Professionals - Physical, Mental, Social and Character Traits. Theories of Selling: AIDA, Right set of circumstances theory of selling, Buying Formula theory of selling, Behavioral Equation theory, Career in Personal Selling / Sales; What Companies Look for in New Salespeople. **(4)**

2.   Personal Selling Process: Prospecting- objectives, sources and methods, Lead Generation, Getting appointment, Sales Responsibilities and Preparation; Pre approach-step toward sales planning-elements of sales call planning; Customer need discovery & Analysis; Approach- sales presentation/ demonstration- selection of appropriate presentation method, essentials of presentation, sales presentation mix- persuasive communication, visual presentation and dramatization, Use of questions- Direct questions, non- directive questions, rephrasing, redirect questions; Sales Leads, Account Management, Building long-term partnership by Selling, Strategic Understanding of Company, Products, Competition, and Markets Strategic Understanding of Company, Strategic Understanding of Products. **(7)**

3.   Personal Selling Process: Handling objection- hidden, stalling, no need, money objection, etc., objection handling techniques, Closing the sale- reading buying signals, closing techniques- the alternative choice, assumptive, the compliment, the summary, the continuous, the minor point, the tea account, the standing room and the probability; Follow up after sales- Discuss service requirements, handling complaints, Key Account Management. Customer Service : meaning of Customer Service, Importance of Customer Satisfaction Customer Follow-Up Strategies, Customer Service Questionnaire, Evaluating Customer Service. **(7)**

4.   Personal Selling Skills: Negotiation, Communicating Effectively with Diverse Customers – Meaning of Communication, Developing Communication Skills, essentials of Effective Communicator, Communication Styles, making choice of Communication Style, Communication and Trust Building , Listening Skills, Presentation and Demonstration, ,

Body Language- Space, Moments, Eye Contacts & Postures, Follow up Calls, Writing Effective Sales Letters and e- mails, Positive Mental Attitude, Goal Setting, Effective Dressing, Managing Yourself, Managing Time and Territory Self-Management Effectiveness and Efficiency Sales Activities, Setting Priorities Account And Territory Management, Working Smarter , Cold Call Mechanism, Tools and Technical aids for Selling. **(3)**

5.   Personal Selling Applications and Situations: Selling of services- financial, IT and telecommunication, advertising, education; Selling of industrial products- raw material, capital goods, supplies; Selling of consumer goods- convenience, shopping and specialty goods; International selling; Selling in rural markets; Selling high and low involvement products; Selling to new and existing customers Market; Selling to end users, intermediaries, government departments and agencies; Selling individual and groups. **(4)**

Suggested Text Books:
1.   Fundamentals of Selling by Charles M. Futrell, Tata McGraw Hill 10th Edition
2.   A B C' s of Selling by Charles M. Futrell, AITBS, New Delhi,
3.   World Class Selling by Roy Chitwood, JAICO Publishing House
4.   Successful Selling Solutions by Julian Clay, Viva Books
5.   Value Added Selling by Tom Reilly, TMGH

Suggested Reference Books:
1.   Achieving Sales Excellence by Howard Stevens, Viva Books Pvt. Ltd.
2.   Power Sales Presentation by Stephan Schiffman, Adams Media Corporations.
3.   Sales Essentials by Stephan Schiffman, Avon Massachusset
4.   Smarter Selling by Keith Dugdale& Lambert, Prentice Hall.
5.   Successful Sales- Get Brilliant Results Fast by Pauline Rowson, Viva Books.
6.   Successful Selling Skills by Richard Denny, The Sunday Times.
7.   The Art and Science of Negotiation by Raiffa H, Cambridge: Belknap/Harvard Press
8.   Getting to Yes by Fisher R and Ury W, Harmondsworth Middlesex, GB Penguin Books

Semester II		220MKT: Digital Marketing - I
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO220MKT.1	REMEMBERING	DEFINE various concepts related to Digital Marketing.
CO220MKT.2	UNDERSTANDING	EXPLAIN the role of Facebook, Google Ad words, Youtube and Email in digital marketing.
CO220MKT.3	APPLYING	MAKE USE OF Facebook, Google Ad words, Youtube and Email for carrying out digital marketing of real life products.
CO220MKT.4	ANALYSING	ILLUSTRATE the use of Facebook, Google Ad words, Youtube and Email in various contexts of Digital Marketing.
CO220MKT.5	EVALUATING	DESIGN digital media campaign using appropriate mix of Facebook, Google Ad words, Youtube and Email.
CO220MKT.6	CREATING	CREATE appropriate content for Facebook, Google Ad words, Youtube and Email campaigns.

1.   Digital Marketing Planning and Structure: Inbound vs Outbound Marketing, Content Marketing, Understanding Traffic, Understanding Leads, Strategic Flow for Marketing Activities. WWW, Domains, Buying a Domain, Website Language & Technology, Core Objective of Website and Flow, One Page Website, Strategic Design of Home Page, Strategic Design of Products & Services Page, Strategic Design of Pricing Page, Portfolio, Gallery and Contact Us Page, Call to Action (Real Engagement Happens), Designing Other Pages, SEO Overview, Google Analytics Tracking Code, Website Auditing, Designing Wordpress Website. **(5+1)**

2.   Facebook Marketing Fundamentals: Profiles and Pages, Business Categories, Getting Assets Ready, Creating Facebook Pages, Page Info and Settings, Facebook Page Custom URL, Invite Page Likes, Featured Video, Pin Post and Highlights, Scheduling Posts, Facebook Events, Reply and Message, Facebook Insights Reports, Competitor's Facebook Page, Ban User on Facebook Page, Connect with Twitter. Facebook Ad Campaigns: Organic v/s Paid, Defining Ad Objective, Performance Matrix, Ad Components, Designing Creative Image, Facebook Ad Structure, Setting Up Facebook Ad Account,

Create Ad –Targeting, Create Ad –Budgeting, Create Ad –Creative, Content and CTA, Boosting Page Posts, Page Promotion, Video Promotion, Similar Ads and Audiences, Tracking Pixels Code, Remarketing -Website Visitors, Custom Audiences - Look Alike, Custom Audience -Saved Group, Managing and Editing Ads, Ad Reports and Ad Insights, Billing and Account. Facebook Business Manager, People, Pages and Roles, Ad Accounts Configurations, Ad Agencies and Assigning, Shared Login for FB Business A/c, Power Editor, Email Targeting on Facebook, Facebook Offers, CTA on Page, Posts for Location, Save Time with Third Party Tools, Case Studies. **(5+1)**

3.   **Google Adwords:** Understanding Adwords, Google Ad Types, Pricing Models, PPC Cost Formula, Ad Page Rank, Billing and Payments, Adwords User Interface, Keyword Planning, Keywords Control, Creating Ad Campaigns, Creating Text Ads, Creating Ad Groups, Bidding Strategy for CPC, Case Studies. PPC, CPM, CPA , Other Measuring Tools, Bidding Strategy on Location, Bidding Strategy on Schedule, Bidding Strategy on Devices, Conversion Tracking Code, Designing Image Ads, Creating Animated Ads, Examples on Animated Ads, Creating Video Ads, Youtube Video Promotion, Hi-Jack Competitor's Video Audience, Case Studies. Remarketing Strategies, Remarketing Rules, Remarketing Tracking Code, Linking Google Analytics, Designing Remarketing Images, Shared Budget, GWD Software, Case Studies. **(5+1)**

4.   **YouTube Marketing**: Video Flow, Google Pages for YouTube Channel, Verify Channel, Webmaster Tool –Adding Asset, Associated Website Linking, Custom Channel URL, Channel ART, Channel Links, Channel Keywords, Branding Watermark, Featured Contents on Channel, Channel Main Trailer, Uploading Videos, Uploading Defaults, Creator Library, Case Studies. Channel Navigation, Video Thumbnail, CTA –Annotation, CTA –Extro, CTA –Cards for Mobile, Redirect Traffic to Website, Post Upload Enhancements, Live Broadcasting, Managing Playlists, Managing Comments, Managing Messages, Monetization with Adsense, Paid YoutubeChannel, Channel Analytics, Real Time Analytics, Case Studies. **(5+1)**

5.   **Email Marketing - Content Writing:** Email Machine –The Strategy, Email Frequency, Why People Don't Buy, The Fuel –Value, Triggers in Email using 4Ps, Sequence of Email Triggers, Email Example - Topic, Intro, Product, Secondary Value, Fear, Regret, Ask for Sales, Reinforcement, Offers Announcements, Urgency, Cross Sales, Re-Engagement, Buyer vs Consumer. Email Software and Tools, Importing Email Lists, Planning Email Campaign, Email Templates and Designs, Sending HTML Email Campaigns, Web Forms Lead Importing, Integrating Landing Page Forms, Campaign Reports and Insights, Segmentation Strategy, Segmentation Lists, Auto-Responder Series, Triggering Auto –Responder Emails, Auto Responder Actions, Case Studies. **(5+1)**

Suggested Text Books:
1.   Google Adwords for Beginners: A Do-It-Yourself Guide to PPC Advertising, Cory Rabazinsky,
2.   Email Persuasion: Captivate and Engage Your Audience, Build Authority and Generate More Sales With Email Marketing, Ian Brodie
3.   Social Media Marketing All-In-One for Dummies, Jan Zimmerman and Deborah

Semester II		221MKT: Marketing of Financial Services - I
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221MKT.1	REMEMBERING	RECALL and DESCRIBE the key terminology of Financial Services.
CO221MKT.2	UNDERSTANDING	DESCRIBE the various types of financial products and services.
CO221MKT.3	APPLYING	DEVELOP FAQs for each kind of financial products and services from an investment advisor's perspective.
CO221MKT.4	ANALYSING	COMPARE and CONTRAST the various types of financial products and services and ILLUSTRATE their benefits and limitations.
CO221MKT.5	EVALUATING	EVALUATE the financial products and services from an investment perspective for various kinds of investors.
CO221MKT.6	CREATING	COLLECT the application forms for all kinds of investments and DISCUSS each of them.

1.   **Financial Market Fundamentals: Equity Markets:** Capital Markets, Role in the Economy, Brief History of BSE and NSE. Trade lifecycle of a financial instrument, Market Participants in the Equity markets with perspectives on 'Buy' side and 'Sell' side, Key terminologies related to the Equity markets. **Bond Markets:** Introduction to bond markets, how bond markets operate? Key terminologies related to the bond markets. Regulatory aspects of the Bond Markets, Key players in the Bond Markets (such as FIIs, Hedge Funds etc.) **Debt Instruments:** Debt instruments and their classification based on

type of issuer, and basis characteristics. Money Market Instruments (such as Certificate of Deposit, Re-purchase ''Agreements etc.) **(5+1)**

2. **Mutual Funds: Basic Concepts:** Mutual Funds and their importance, Various entities of a Mutual Fund and their respective roles - Basic understanding of NAV and calculation of a Fund - NAV, Types of Loads and Commissions charged on Mutual Funds and their significance. **Types:** Types of Mutual Funds in India, classified on the basis of Structure, Investment Objective, and Investment Plan, Relative risks associated with various Mutual Funds in India. Basic understanding of ETFs and their key features. Differences between a Mutual Fund and an ETF. Basic understanding of a 'Hedge Fund' and its key features, Process of Fund Selection and various related measurement parameters, Various expenses incurred by a Fund. **Investment Advisors:** Guidelines for Investment Advisors while selling Mutual Funds to the clients. **(5+1)**

3. **Insurance: Basics of Insurance:** Basic understanding of insurance products, types of insurance policies – Role of IRDA, Insurance industry in India. **General Insurance:** Types of liabilities covered, extent of insurance value, and conditions. **Life Insurance:** Basic concept of Life Insurance, its beneficiaries and its types, Concept of Term Insurance and its various types, Traditional Life Insurance and its difference from Term Insurance, Whole Life Policy and Endowment Policy and the differences between them. ULIP and its comparison with conventional plans and Mutual Funds. **Marketing Channels in Insurance Markets:** Various channel members in the Industry such as Insurance Agents, Distributors, etc. **Basic Understanding**: Property and casualty/liability insurance, Commercial Insurance, Health Insurance. **(5+1)**

4. **Other Financial Services: Leasing / Hire Purchase:** Definition, meaning, types, process, advantages, limitations, financial implications. **Housing Finance:** Major institutions involved, types, rate of interest, advantages, scenario in India. **Credit Cards:** Meaning, types, growth, advantages and disadvantages, growth in India. **Credit Rating Services:** Origin, definition, advantages, credit rating agencies - global and Indian, symbols, CRISIL, ICRA, equity ratings, CIBIL, scope in India. **Other Services:** Factoring, forfeiting, bill discounting, consumer finance and venture capital. **(5+1)**

5. **Marketing of Financial Services: Importance of Financial Planning:** identification of investment needs for retail investors, studying investment behavior - Houeshold Vs. Institutional Investors. **Alternate Investment Products:** Introduction to Alternate Investments and their various products and services, Portfolio Management Services and their features, Tax regulations from an Investment Advisor point of view. **Career opportunities in Marketing of Financial Services. (5+1)**

Suggested Text Books:
1.	Financial Services, M Y Khan, Tata McGraw-Hill
2.	Financial Services & Markets, Dr. Punithavathy Pandian, Vikas Publication
3.	Marketing of Financial Services, V.A. Avadhani, Himalaya Publishing House
4.	Financial Services Marketing, Christine Ennew , Nigel Waite
5.	Financial Services, Nalini Prava Tripathy, Prentice Hall of India Private Limited

Semester II		222MKT: Marketing of Luxury Products
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO222MKT.1	REMEMBERING	RECALL and DESCRIBE the key concepts and principles of luxury brand management and marketing.
CO222MKT.2	UNDERSTANDING	DESCRIBE the unique consumer behavior in the context of luxury products .
CO222MKT.3	APPLYING	IDENTIFY potential new luxury products and how they relate to a variety of markets, including emerging markets & India.
CO222MKT.4	ANALYSING	COMPARE and CONTRAST the luxury products , brands and industry with routine products, brands and industry.
CO222MKT.5	EVALUATING	ASSESS internal and external factors impacting the luxury markets, nationally, internationally and globally.
CO222MKT.6	CREATING	Formulate marketing strategy for contemporary luxury products and brand.

1. **Theoretical foundations of luxury management:** Defining brand, luxury and relativity, luxury goods, luxury brand, fashion, difference and similarity between luxury and fashion, Unique properties, opportunities, and challenges of ever-changing markets of design, fashion, and luxury goods. Luxury - historical and contemporary perspectives. Main luxury sectors: definition and trends. Luxury brands in the emerging markets and the Indian context. **(5+1)**

2.   **Methodological approaches to understanding luxury:** Identifying a luxury product: basic approaches and main types, Features of consumer behavior, Basic psychological phenomena associated with luxury purchase, Luxury consumption motives, Luxury Brand Identity, Changing marketing dynamics and impact on the marketing, experience and consumption of luxury. **(5+1)**

3.   **Luxury Segmentation, Targeting, Positioning & Marketing Mix:** Pursuing long term profitability through sound marketing strategies. **Market segmentation** beyond the socioeconomic. **Positioning** – (a) Identity management - Communication policy, managing creativity, corporate image and volatility, (b) Channel management **Luxury marketing mix**: product policy, price policy, distribution policy, Craftsmanship: How are things made and why it matters, Communicating & Distributing Luxury. **(5+1)**

4.   **International luxury markets:** historical leaders and emerging countries, Binary Conventions in Luxury: East vs. West; Masculine vs. Feminine; Seriousness vs. Humor, What does Culture have to do with luxury and how you can use it to market luxury effectively. **(5+1)**

5.   **Luxury retail**: The beauty & fragrance industries, Fine Jewelry & timepieces; Accessories; Art, Beauty products, Hospitality, Automotive, Fashion. **(5+1)**

Suggested Text Books:
1.   The Luxury Strategy, Kapferer, Jean-Noel and V. Bastien, Kogan Press

Suggested Reference Books:
1.   The Luxury Strategy: Break the Rules of Marketing to Build the Luxury Brand, Bastien Vincent, Kapferer Jean-Noël, Kogan Page
2.   The idea of prestige: A conceptual and historical investigation, Berry, C.J., Cambridge University Press.
3.   Economics and consumer behavior, Deaton, A., & Muellbauer, J., Cambridge University Press.

Subject Core (SC) Courses - Semester II
Specialization: Financial Management

Semester II		205FIN: Financial Markets and Banking Operations
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO205FIN.1	REMEMBERING	RECALL the structure and components of Indian financial system through banking operations & Financial Markets.
CO205FIN.2	UNDERSTANDING	UNDERSTAND the concepts of financial markets, their working and importance.
CO205FIN.3	APPLYING	ILLUSTRATE the working and contribution of Banks and NBFCs to the Indian Economy.
CO205FIN.4	ANALYSING	ANALYZE the linkages in the Financial Markets.
CO205FIN.5	EVALUATING	EXPLAIN the various banking and accounting transactions.
CO205FIN.6	CREATING	DEVELOP necessary competencies expected of a finance professional.

1.   **Basic Concepts of Indian Financial System**: Structure and Components: Indian financial system in India, Role of financial system in economic development. Introduction to financial Institutions – Banking – Non Banking Institutions. Role and Functions of Banks and their Contribution to Indian Economy. Introduction to Financial Markets, Functions and Classification. Money Market, Capital markets, Bond markets, Commodity markets, Money markets, Derivatives markets, Futures markets, Foreign exchange markets, Crypto currency market **(7+2)**

2.   **Money Market:** Structure and components: Participants in Indian Money Market, Money Market Instruments, Structure of Money Market, Role of central bank in money market; Players in the Indian Money Market, The reforms in Indian Money Market. **(7+2)**

3.   **Capital Market:** Components & Functions of Capital Markets, Primary & Secondary Market Operations, Capital Market Instruments - Preference Shares, Equity Shares, Non-voting Shares, Convertible Cumulative Debentures (CCD), Fixed Deposits, Debentures and Bonds, Global Depository receipts, American Depository receipts, Global Debt Instruments, Role of SEBI in Capital Market. **(7+2)**

4.   **Banks and NBFCs:** Types of Banks & NBFCs: Central Bank, Nationalized & Co Operative Banks, Regional Rural Banks, Scheduled Banks, Private Banks & Foreign Banks, Mudra Bank, Small Finance Banks, Specialized Banks, NBFCs. Types of Banking: Wholesale and Retail Banking, Investment Banking, Corporate Banking, Private Banking, Development Banking. **(7+2)**

5.   **Concepts in Banking and Accounting of transactions:** Accounting in banks, Electronic Banking, RTGS, ATM, MICR, OCR, OMR, and DATANET, Petty Cash, Electronic Clearing Service (ECS), National Electronic Funds Transfer (NEFT) System, Real Time Gross Settlement (RTGS) System, IMPS. **(7+2)**

Suggested Text Books:
1.   Indian Financial Services, M Y Khan
2.   Marketing of Financial Services, Dr D Guruswamy
3.   Financial Services In India, Avadhani,V.A.
4.   Risk and Insurance Concepts , P Perriasamy, M Veerasevalam
5.   Financial services of India, Dr. D Guruswamy
6.   Capital Markets & Financial Services, Anil Agashe
7.   Financial services, M. Y. Khan

Semester II		206FIN: Personal Financial Planning
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES

CO206FIN.1	REMEMBERING	UNDERSTAND the need and aspects of personal financial planning
CO206FIN.2	UNDERSTANDING	Describe the investment options available to an individual
CO206FIN.3	APPLYING	IDENTIFY types of risk and means of managing it
CO206FIN.4	ANALYSING	DETERMINE the ways of personal tax planning
CO206FIN.5	EVALUATING	EXPLAIN retirement and estate planning for an individual and design a financial plan.
CO206FIN.6	CREATING	CREATE a financial plan for a variety of individuals.

1. **Introduction to Financial Planning:** Need for Financial Planning, Assessing personal and financial goals, needs and priorities, attitudes and expectations and risk tolerance level, Personal Financial Planning Process, Preparation of Personal Budget, Personal Financial Statements, Responsibilities of a Financial Planner, Time Value of Money, KYC, PAN & AADHAR **(5+2)**

2. **Investment Planning:** Introduction to Investment Planning, Investment Criteria- liquidity, safety and Profitability, Investment vehicles (Gold, Bonds, Equity, FD, Insurance, MFs, ETFs, Post Office Savings, Real Estate etc.), Risk and Return associated with these investments, Return comparison over a period of time from different asset classes, Investment strategies, Mutual Funds as Investment Vehicle-Special focus on SIP, STP, and SWP, NFOs, Trading in Commodities, Derivatives and F&Os, Crypto currency, Creating an Investment Portfolio, Awareness of mis-selling in investment products. **(10+2)**

3. **Risk Analysis, Insurance Planning and Debt:** Risk analysis, Concept of long term risk, Insurance decisions in personal financial planning, Types of insurance cover- mortality, health, disability, property and liability, ULIPs and Term Plans, Credit Card Financing, Types of Consumer and Home Loans- cost and risk, Credit Score. **(8+2)**

4. **Tax Planning:** What is Tax Deduction? Tax Deductions under the Section and respective Subsections of : 80C, 80D, 80E, 80G, 80 I, Sections 80 JJA, 80QQB, 80RRB, 80TTA, 80U and other relevant sections, Direct Tax Code (DTC), Taxation impact on different investment options, Personal tax planning, Filing IT Returns. **(6+2)**

5. **Retirement Planning and Estate Planning:** Wealth creation, retirement planning for an individual, Pension Plans, Provident Fund, Gratuity, Life Insurance Plans., General Insurance Plans, Reverse Mortgage Plans, Senior Citizen Schemes, What is Estate? Who needs Estate Planning? Transferring assets during life time, Power of Attorney, Transferring assets post death – e.g., Nominations, Will, and Creating Trusts. **(6+2)**

Note:
1. **The weightage in the question paper shall be as follows:** Numerical problems / Cases: 40% & Theory: 60%
2. **Formats of documents to transfer assets should be discussed**
3. **Numerical problems on the following should be taught :**
   a) Time Value of Money: Compounding, Discounting, Annuities, Sinking Fund, Perpetuities
   b) EMI calculation on loans

Suggested Text Books:

1. Basics of Personal Financial Planning Insurance Education Series by NIA, K C Mishra, Steward Doss, Cengage Delmar Learning India Pvt. Ltd.

Suggested Reference Books:
1. Introduction to Financial Planning , Indian Institute of Banking & Finance
2. Personal Financial Planning Theory and Practice, Kaplan Schweser
3. Personal Finance, E. Thomas Gorman and Raymond E. Forgue, Southwest-Western Cengage Learning.
4. Fundamentals of Financial Planning, Michael Dalton, Joesph Gillice, James Dalton and Thomas Langdon, Money Education
5. Personal Financial Planning, Benedict Koh Wai Mun Fong, Pearson
6. Personal Financial Planning, Lawrence J. Gitman , Michael D.Joehnk, Cengage NOW.

Subject Elective (SE) Courses - Semester II Specialization: Financial Management

Semester II		217FIN: Securities Analysis & Portfolio Management
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217FIN.1	REMEMBERING	REMEMBER various concepts taught in the syllabus.
CO217FIN.2	UNDERSTANDING	EXPLAIN various theories of Investment Analysis and Portfolio Management.
CO217FIN.3	APPLYING	CALCULATE risk and return on investment using various concepts covered in the syllabus.
CO217FIN.4	ANALYSING	ANALYZE and DISCOVER intrinsic value of a security.
CO217FIN.5	EVALUATING	DESIGN/ CREATE optimal portfolio.

1.	**Introduction & Concepts: Investment:** Meaning, nature & objectives, Investments Vs. Speculation & Gambling, Investment Process, Investment Environment, Investment avenues: Marketable & Non marketable financial assets. **Portfolio Management:** Meaning, attributes, significance and process of Portfolio Management, Portfolio manager and his role **(3+1)**

2.	**Risk & Return Analysis: Risk & Return:** Meaning and Elements of Risk & Return, Measurements of Risk & Return, Relationship between risk and return. **Fundamental Analysis:** Economy analysis, industry analysis and company analysis, weaknesses of fundamental analysis. **Technical Analysis:** Meaning, Tools of technical analysis, Technical Analysis vs. Fundamental Analysis. **Efficient Market Theory:** Meaning. Forms of Market Efficiency, Efficient Market Hypothesis vs. Fundamental & Technical Analysis **(7+1)**

3.	**Valuation of bonds and shares: Bond Valuation:** Meaning, Types, Bond Prices, Bond Return, Risks in Bonds. **Equity Valuation:** Meaning, Concept of Present Value, Share Valuation Models, Multiplier Approach to Share Valuation **(5+1)**

4.	**Portfolio Analysis & Selection: Concept of portfolio and portfolio management:** Meaning, Types of Portfolio Risks, Diversification of Risks, Selection of Optimal Portfolio. **Markowitz Portfolio Selection Model:** Efficient set of portfolios, Optimal Portfolio selection, Limitations of the Model. **Capital Asset Pricing Model (CAPM):** Meaning, Assumptions & Limitations of CAPM. **Sharpe-The Single Index Model:** Measuring security risk & return, Measuring Portfolio Risk & Return**. Factor Models and Arbitrage Pricing Theory:** Arbitrage Pricing Theory and its principles, Comparison of Arbitrage Pricing Theory with the Capital Asset Pricing Model **(7+1)**

5.	**Portfolio Revision & Evaluation : Portfolio Revision:** Meaning and need of Portfolio Revision, Constraints in Portfolio Revision, Revision Strategies, **Portfolio Evaluation:** Meaning and need of Portfolio Evaluation, Evaluation Perspectives,Measuring Portfolio Returns & Risk Adjusted Returns **(3+1)**

Suggested Text Books:
1.	Investment Analysis and Portfolio Management, Chandra, Prasanna (Tata McGraw Hill Publishing Co. Ltd.)
2.	Securities Analysis & Portfolio Mgmt., V A Avadhani ,Himalaya Publications
3.	Security Analysis and Portfolio Management, S. Kevin, PHI Learning Pvt. Ltd.
4.	Investment Analysis & Portfolio Management, Ranganathan&Madhumathi ,Pearson Education Pvt. Ltd.

Suggested Reference Books:
1.	Security Analysis and Portfolio Management, Fischer DE & Jordan R J, Prentice Hall.
2.	Portfolio Management, Barua, S. K.; Raghunathan V; Varma, J R ,Tata McGraw Hill Publishing Co. Ltd.
3.	Investment Analysis and Portfolio Management, Frank K. Reilly and Keith C. Brown ,Thomson Learning
4.	Modern Investments and Security Analysis, Fuller R J; Farrel JL ,McGraw Hill
5.	Investment Management, V.K. Bhalla ,S.Chand& Co.
6.	Security Analysis & Portfolio Management, S.Bhat, Excel Books
7.	Security Analysis and Portfolio Management, Punithavathy P., Vikas Publishing
8.	Security Analysis and Portfolio Management, A.P. Dash,I.K. International

Semester II		218FIN: Futures & Options
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO218FIN.1	REMEMBERING	DESCRIBE the basic concepts related to Derivatives, Types of Derivative products and Risk Management
CO218FIN.2	UNDERSTANDING	EXPLAIN in detail the terminology used in the Futures and Options segment of finance domain
CO218FIN.3	APPLYING	UNDERSTAND and DIFFERENTIATE between Options and Futures pricing and apply the understanding in the simulated virtual trading platform.
CO218FIN.4	ANALYSING	ANALYZE and offer optimum solutions in the cases of risk management through hedging with futures and options.
CO218FIN.5	EVALUATING	EVALUATE the various derivative strategies for their application in different situations.

1.   **Introduction:** Definition of Derivative, Brief History of Derivatives, Participants in Derivative Market, Economic functions of derivative market, Evolution of Commodity, Currency, Stocks and Interest Rate Derivatives, Structure of Derivative Market - Forwards, Futures, Options, Swaps, etc. Reasons for Trading: Risk Management, Speculation and Arbitrage. **(5+1)**

2.   **Market Characteristics:** Futures and Options Contract Specifications, Underlying Asset, Contract Size, and Delivery Specifications. Mark to Market using Margin Accounts, Familiarizing with Market Quotes, Trading Strategies involving Options and Futures, Interest Rate Derivatives, Contractual Specifications - Floating and Fixed Rate, Valuation of Interest Rate Derivatives. **(5+1)**

3.   **Derivatives Pricing Theory:** Option Pricing: Option Payoffs, Black-Scholes formula for Option Pricing, Futures Pricing: Pricing by Arbitrage: Relationship between Futures and Spot Price (cost of carry and reverse cost of carry), Difference between Futures and Forward Price. **(5+1)**

4.   **Risk Analysis and Management:** Risk Measurement and Management Framework. Delta/Theta/Vega & Gamma risks of options, Hedging with Futures. **(5+1)**

5.   **Options and Futures Applications in India:** Structure of Indian Stock Markets and the Operational Efficiency of Options and Futures, Determination of the Fair Value of Futures and Options Prices, Interactions between Spot Equity Trading and Trading in Derivatives. Index Options and Futures, Constructing an Index, Methodology of Construction, Trading an Index. Conditions necessary to Improve the Market Structure in India and Policy Interventions. **(5+1)**

Suggested Text Books:
1.   Futures & Options, A.N.Sridhar
2.   Financial Derivatives, S.L.Gupta
3.   Financial Derivatives, S.S. Kumar
4.   Options, Futures & Other Derivatives, John C. Hull
5.   Option Volatility & Pricing, Sheldon Naten Berg
6.   The New Options Market, Max Ansbacher

Suggested Reference Books:
1.   Futures & Options, ND Vohra, B.R.Bagr
2.   Derivatives & Risk Management Basics, Don. M. Chance, Robert Brooks.
3.   Derivatives & Risk Management, Jayanth Rama Varma

Semester II		219FIN: Direct Taxation
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219FIN.1	REMEMBERING	UNDERSTAND various basic concepts/ terminologies related Direct Taxation
CO219FIN.2	UNDERSTANDING	EXPLAIN how tax planning can be done.

CO219FIN.3	UNDERSTANDING	ILLUSTRATE how online filling of various forms and returns can be done.
CO219FIN.4	APPLYING	CALCULATE Gross Total Income and Income Tax Liability of an individual assessee.
CO219FIN.5	ANALYSING	ANALYZE and DISCOVER intrinsic value of a security.
	EVALUATING	DESIGN/ DEVELOP / CREATE tax saving plan.

1.   **Introduction:** Introduction of Income Tax Act, 1961, Basic definitions and concepts – Direct Tax, Indirect Tax, Person, Assessee, Deemed Assessee, Assessment Year, Previous Year, Residential Status of an individual assessee and company, Income exempt from Tax– Gratuity, Leave Travel Concession, Encashment of Unutilized Earned Leave on Retirement, Pension, Voluntary Retirement Receipts, Retrenchment Compensation, Receipts from Life Insurance Corporation, HRA, Payment from NPS Trust to an assesseeon closure of his account/ Opting out of the pension scheme and Payment from NPS Trust to an employee on partial withdrawal, Agriculture Income. **(3+2)**

2.   **Income under the Head "Salaries"& "Income from House Property":** Meaning of salary, Basis of charge of salary income, different forms of salary, different forms of allowances, perquisites, permissible deductions from salary income, tax treatment of provident fund, Basis of charge, property income not charged to tax, computation of income from let out house property and self-occupied property. **(8+2)**

3.   **Income under the Head "Profits and Gains of Business and Profession":** Computation of profit or gain from business and profession (expenses expressly allowed as deduction; general deductions; expenses specifically disallowed) basis of charge; chargeable incomes; specific deductions; amount not deductible **(8+2)**

4.   **Income under the Head "Capital Gain" and "Other Sources": Capital Gain"**- Meaning- Capital Gain, Basis of charge, important definitions like Capital Asset, Short Term Capital Asset, Long Term Capital Asset, Transfer of Capital Asset, Short Term Capital Gain and Long term Capital Gainand their computation. **"Other Sources"** - Incomes Chargeable Under the head "Other Sources" (Section 56), Deductions Allowable (Sec. 57), Deductions Not Allowable (Sec 58), Bond Washing Transactions and Dividend Stripping (Sec 94). **(8+2)**

5.   **Net Taxable Income and Certain other Points:** Computation of net total income based on 5 heads, carry forward and set-off of losses and deductions under Sec. 80, Computation of Income Tax Liability, Advanced Payment of Tax, TDS, Tax Planning & Tax Evasion, Income Tax Returns, E-filling of ITR **(8+2)**

Suggested Text Books:
1.   Direct Taxes, Ravi Kishore
2.   Direct Taxes, J.P. Jakhotiya
3.   Direct Taxes, Dr. Girish Ahuja & Dr. Ravi Gupta
4.   Direct Taxation, Dr. Pradip Kumar Sinha

Suggested Reference Books:
1.   Students Guide to Income Tax, Dr. Vinod Singhania (Taxmann)
2.   Income Tax Law and Practices, V.P. Gaur, D.B. Narang, Puja Ghai& Rajiv Puri (Kalyani Publication)
3.   Students' Hand Book on Income Tax, T.N. Manoharan& G.R. Hari

Semester II		**220FIN: Financial Reporting**
2 Credits	**LTP: 2:1:1**	**Subject Elective (SE) Course – Financial Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219FIN.1	REMEMBERING	Describe the basic concepts related to Financial Reporting taught through the syllabus.
CO219FIN.2	UNDERSTANDING	Explain, in detail, all the theoretical concepts taught through the syllabus.
CO219FIN.3	APPLYING	Do all the necessary calculations pertaining to financial reporting.
CO219FIN.4	ANALYSING	Analyze the situation and decide the key elements of financial reporting through the financial statements.
CO219FIN.5	EVALUATING	Evaluate the compliance and quality of financial reporting.

1.   **Financial Statements Preparation Framework:** Purpose and Scope of Financial Statements, Users of Financial Statements, Underlying Assumptions – Going Concern, Consistency and Accrual, Qualitative Aspects of Financial

Statements – Understandability, Materiality, Faithful Representation, Substance Over Form, Neutrality, Prudence, Completeness.

2. **Preparation of Corporate Financial Statements:** Division II of Schedule III of the Companies (Amendment) Act, 2015 – Part I: Balance Sheet and Statement of Changes in Equity, Part II – Statement of Profit and Loss and Notes to Financial Statements.

3. **Presentation of Items in Financial Statements and Revenue Recognition using relevant Indian Accounting Standards (AS):** Ind AS 1 "Presentation of Financial Statements", Ind AS 7 - "Statement of Cash Flows", Ind AS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" and Ind AS 34 – "Interim Financial Reporting", Ind AS 115 – "Revenue From Contract With Customers".

4. **Reporting of Assets, Liabilities and Disclosures in Financial Statements using relevant Indian Accounting Standards (AS):** Ind AS 2 "Inventories", Ind AS 16 "Property, Plant and Equipment", Ind AS 23 "Borrowing Costs", Ind AS 36 "Impairment of Assets", Ind AS 38 "Intangible Assets", Ind AS 19 "Employee Benefits", Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets", Ind AS 33 "Earnings Per Share" and Ind AS 108 "Operating Segments".

5. **Miscellaneous Issues in Financial Reporting:** Reporting of Financial Instruments, Value Added Statements, Corporate Social Responsibility Reporting.

Suggested Text Books:
1. Advanced Accountancy, ShuklaGrewal, S. Sultan Chand & Co.
2. Financial Accounting: Reporting and Analysis, Stice
3. Financial Reporting and Management Accounting, Bruns
4. Financial Management, Prasanna Chandra
5. Indian Accounting Standards& GAAP, Dolphy D'Souza , Snow White Publications
6. Financial Management, Khan and Jain
7. Corporation Finance, S.C.Kuchhal

Semester II		221FIN: Securities Analysis & Portfolio Management
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221FIN.1	REMEMBERING	Remember and describe the key concepts covered in the syllabus.
CO221FIN.2	UNDERSTANDING	Explain in detail the Retail Credit Evaluation, Lending and Recovery Process as well as other relevant concepts covered in the syllabus
CO221FIN.3	APPLYING	Calculate the loan eligibility of the retail borrower and the amount to be classified as NPA.
CO221FIN.4	ANALYSING	Determine the key elements of retail lending and recovery process and documentation therein.
CO221FIN.5	EVALUATING	Design the Retail Lending and Recovery Process for a Bank & NBFC.

1. **Retail Credit**: Introduction, Basic features of retail credit sector, Multiple Products and Multiple channels of Retail sector**(Retail Banking and NBFC),** Credit Information companies in India (CIBIL and others) Credit history and Credit Score, General Guidelines –Processing applications, Terms and Conditions, Disbursement, Banking Codes and Standard Board of India(BCSBI) **(5 +1)**

2. **Banking Retail credit products and Procedures**: Personal Loans, Home loans, Home loans for NRI, Auto loans, Consumer loans for durable goods, Educational loans, Gold loan (Eligibility, Purpose, Maximum Loanable Amount, Margin of Safety, Security Against Loan, Pre-Payment/Foreclosure),Credit cards(Eligibility, Security, Billing Cycles, Credit Points, Credit Transfer), Priority sector Advances(Targets,sub targets,recent developments) **(5 +1)**

3. **Non Banking Financial companies Retail credit products and procedures:** Introduction of NBFC, Role of NBFC in India, Personal finance, Gold loan, consumer durables, two wheeler loans, education loans, Difference between retail credit sector in banking & NBFC. **(5 +1)**

4. **Non-Performing Assets**: Present NPA norms, Features of special accounts, willful defaulters, recovery measures. **(5 +1)**

5. **Debt Recovery Management** -Legal and non-legal measures, Consumer Protection in retail credit, Strategies of banks, OTS Agreement, Critical issues on recovery of bad loan, Insolvency and Bankruptcy Code. **(5 +1)**

Suggested Text Books:
1. Basics of Banking and Finance, Dr.K., Bhattacharya ,O.P.Agarwal
2. Principles & Practices of Banking, Indian Institute of Banking and Finance
3. Banking Theory & Practices, KC Shekhar,Lekshmy Shekhar
4. Banking Reforms and Lead Bank Scheme, Uday Kumar Lal Das
5. Essentials of Banking and Finance, Gautam Majumdar
6. Credit Monitoring, Legal Aspects & Recovery of Bank loan, V.Rajaraman

Suggested Reference Books:
1. Master circulars of RBI
2. The Economic Times

Semester II		222FIN: Banking Laws & Regulations
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO222FIN.1	REMEMBERING	REMEMBER various concepts taught in the syllabus.
CO222FIN.2	UNDERSTANDING	EXPLAIN the Regulatory Framework in the Indian Banking system.
CO222FIN.3	UNDERSTANDING	DESCRIBE the various legal aspects which need to be followed during daily banking operations.
CO222FIN.4	UNDERSTANDING	DISCUSS the various laws related to banking.
CO222FIN.5	APPLYING	APPLY the various commercial laws for the smooth functioning of banking operations.

1. Regulatory Framework: Business of Banking, RBI Act 1934, Banking Regulation Act 1949, Role of RBI, Government as a regulator, Control over Organization of banks, Control over co-operative banks, Regulation by other authorities. **(4+1)**

2. Compliances of Regulations by Banks: Opening of new banks, Branch Licensing, Board of Directors and their rights, Rights of Banks shareholder, Monetary and Credit policy, Annual statements of accounts, Audit and Inspection, submission of returns to RBI. **(4+1)**

3. Legal Aspects of Banking Operations: Types of borrowers, Types of Credit Facilities (secured, unsecured, fund based, non-fund based), Laws relating to Bill Finance, Securities and Modes of charges (Mortgage, Lien, Pledge, Hypothecation, etc), Creation and satisfaction of charge. **(5+1)**

4. Laws related to Banking: DRT Act 1993, SARFAESI Act, Banking Ombudsman Scheme, Bankers Books Evidence Act 1891, CERSAI, Consumer Protection Act 1986, Negotiable Instruments Act 1881, Payments & Settlement systems Act 2007. **(6+1)**

5. Commercial Laws relating to Banking Operations: The Indian Contract Act 1872, The Sale of Goods Act 1930, The Companies Act1956, Transfer of Property Act 1882, Foreign Exchange Management Act 1999, The Prevention of Money Laundering Act 2002,Information Technology Act2000, The Right to Information Act 2005. **(6+1)**

Suggested Text Books:
1. All Publications of IIBF and NIBM
2. All Bare Acts mentioned in the syllabus

Semester II		223FIN: Fundamentals of Life Insurance – Products and Underwriting
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO223FIN.1	REMEMBERING	RECALL all the concepts pertaining to Life Insurance covered in the course syllabus.
CO223FIN.2	UNDERSTANDING	Explain all the concepts pertaining to Life Insurance covered in the course syllabus.

CO223FIN.3	UNDERSTANDING	DETERMINE the key elements of the Life Insurance Products and Services.
CO223FIN.4	UNDERSTANDING	APPLY the life insurance product knowledge to suit to the clients' needs.
CO223FIN.5	APPLYING	DESIGN the life insurance cover strategy for clients.

1.   **Life Insurance** - Introduction: History and evolution, Functions of Insurance, Advantages of Life insurance, Terminologies in Life Insurance. (4+2)
2.   **Life Insurance Market in India** –Structure of Indian Life Insurance Market, Risks, Types of Risks and Characteristics of Insurable Risks, Perils, Hazards and Life Insurance. (4+2)
3.   **Life Insurance Products** –Term Insurance, Endowment Policy, Whole-Life Policy, Child Policy, Unit Linked Insurance Policy and other relevant products. (4+2)
4.   **Underwriting** – Meaning of Underwriting, Underwriting Process, Underwriting Considerations, Renewals, Lapse and Claims. (4+2)
5.   **Regulatory Aspects and Ethics** –IRDA and its role, Ethics in the Insurance Industry and their importance. (4+2)

Suggested Text Books:
1.   Insurance and Risk Management, P.K.Gupta, Himalaya Publishing House
2.   Insurance, Principles and Practice, S.N.Mishra, S.B.Mishra, S Chand
3.   Principles of Insurance Management, Neelam Gulati, Excel Books
4.   Legal & Regulatory Aspects of Insurance by NIA
5.   Elements of Actuarial Science by NIA
6.   Insurance Business Environment & Insurance Company Operations by NIA
7.   Financial Management & Insurance Accounting by NIA

Suggested Reference Books:
1.   Principles of Risk Management and Insurance, George Rejda, Pearson Education
2.   Risk Management and Insurance by Trieschmann

Semester II		**224FIN: General Insurance – Health and Vehicle**
2 Credits	LTP: 0:3:1	**Subject Elective (SE) Course – Financial Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO224FIN.1	REMEMBERING	DESCRIBE the various terms related to General insurance and Health Insurance.
CO224FIN.2	UNDERSTANDING	UNDERSTAND General insurance, Health Insurance (including travel insurance) and Motor / Vehicle Insurance
CO224FIN.3	ANALYSING	COMPARE and CONTRAST insurance plans
CO224FIN.4	ANALYSING	ANALYZE and USE risk management techniques
CO224FIN.5	EVALUATING	FACILITATE the development of an insurance claim.
CO224FIN.6	EVALUATING	FACILITATE the compliance required for acquiring the policy and settlement of claims.

1.   **General Insurance**: Introduction: History and evolution, How General insurance works, Advantages of General insurance, Principles of Insurance, Insurable interest, Subrogation and Contribution, Types of General Insurance, General Insurance Products in India, Specialized Insurances i.e.Oil & Energy Risks insurance – Satellite insurance. **Risk Management Techniques**: Risk avoidance - Risk retention - Risk reduction and control - Risk financing, Difference between Insurance and Assurance, Roll of the actuary. **Insurance Contract:**Meaning andFundamental principles of insurance contract, Types of insurance contract, Valid insurance contract, Features of insurance contracts, **Reinsurance:** foundation of reinsurance – forms of reinsurance, **(5+1)**
2.   Claims Procedure: Meaning of claim and Importance of settling claims,limitations or notice of loss, Claims Settlement process, Investigation and assessment – Surveyors and loss assessors – Claim forms – Loss assessment and claim settlement - Important Aspects in an insurance claims – categories of claim – Discharge vouchers – Post settlement action – Selvage – Recoveries – Disputes related to claims – Other disputes resolution mechanisms**. Grievance Redressal**

Mechanism: Consumer courts, Ombudsman - Integrated Grievance Management System (IGMS) - The Insurance Ombudsman. (**5+1**)

3. **Introduction to Health Insurance:**Definition of Health and Determinants of Health, Factors affecting the health systems in India, Evolution of health insurance in India, Types of Health Insurance *Schemes / Policies* in India, difference between Health Insurance and Mediclaim Insurance, Health insurance regulations of IRDAI. Health Insurance Products, Classification of health insurance products - IRDA guidelines on standardization in health insurance. Documentation forobtaining Health Insurance Policy. (**5+1**)

4. **Health Insurance Underwriting:**Underwriting concepts - definition, meaning and need, Basic Principles of Insurance and tools for underwriting - Underwriting process - Underwriting of overseas travel insurance - Underwriting of personal accident insurance. **Management of Health Insurance Claims:**stakeholders in claim process, Challenges in health insurance – claims process in health insurance - Documentation of health insurance claims – Claims reserving, Personal Accident – Overseas Travel Insurance. (**5+1**)

5. **Motor or Vehicle Insurance:** Meaning and Definition, Types of motor vehicle insurance, Advantages of Motor insurance, what motor insurance covers, Types of Motor Policies,India Motor Tariff – 2018. Third party Insurance, Legal aspects of Third party claims, Frauds in Motor Insurance, No claim Bonus and claim settlement process. Underwriting in motor insurance – Indian Motor Insurance market – Model wise Risk assessment – Motor Underwriting. (**5+1**)

Suggested Text Books:
1. Principles of Insurance Management, Neelam Gulati, Excel Books.
2. Insurance, Principles and Practice, S.N.Mishra, S.B.Mishra, S Chand Publication.
3. Principles of Risk Management and Insurance, George Rejda, Pearson Publication.

Suggested Reference Books:
1. General Insurance Guide, Dr. L.P.GUPTA.
2. Indian Insurance Industry, Transition and Prospects, D.C. Srivastava, Shashank Srivastava, New Century Publications.
3. Insurance and Risk Management, P.K.Gupta,Himalaya Publishing House.

Subject Core (SC) Courses - Semester II
Specialization: Human Resource Management

Semester II		205HRM: Competency Based Human Resource Management System
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO205HRM.1	REMEMBERING	DEFINE the key terms related to performance management and competency development.
CO205HRM.2	UNDERSTANDING	EXPLAIN various models of competency development.
CO205HRM.3	APPLYING	PRACTICE competency mapping.
CO205HRM.4	ANALYSING	ANALYSE competencies required for present and potential future job roles at various levels and across variety of organizations.
CO205HRM.5	EVALUATING	DESIGN and MAP their own competency and plan better and appropriate career for themselves.
CO205HRM.6	CREATING	DEVELOP a customized competency model in accordance with the corporate requirements.

1. **Performance Management System**: Introduction of PMS-Definition, Scope, Importance, Performance Planning – Individual Goal Setting, Linking individual goals to Organization goals, Performance Coaching- Identification of Training Needs- Job Specification, Identify the Performance Gap, Training Specification, Choose appropriate training module, Counselling for Better Performance, Feedback Mechanism in Organization. (6+3)

2. **Introduction to Competency**: Definition and History of Competency, Basic Components of Competency(Knowledge(K),Skill(S), Attitude(A)), Performance Vs Competency, Difference between Competence and Competency, Type of Competency- Generic Vs Key Competency, Functional and Technical Competency, Leadership and managerial Competency, Need for Competency Framework, Limitation and Learning from Competency Framework, Myth about Competency(6+3)

3. **Competency Development & its Models**: Need and Importance of Competency Development, Stages in developing Competency Model, Types of Competency Model – Core/Generic, Job Specific, Managerial/Leadership, Custom, Development of Personnel Competency Framework – Lancaster Model of Competency.(5+3)

4. **Competency Mapping**: Procedures/Steps-Determining objectives and Scope, clarifying implementation goals and standards, create an action plan, define competency based performance effectiveness (Key Result Area (KRA) & Key Performance Indicators(KPI)), tools for data collection, data analysis, validating competency model, mapping future jobs and single incumbent jobs, using competency profile in HR decisions, Mapping Competency for Recruitment and Selection, Training and Development, Performance and Compensation. (7+3)

5. **Competency Driven Career and Culture**: Role of Competency in Career Progression - Transactional Competency, Tradition Competency and Transformational Competency, Evaluation of Career through KSA (Knowledge, Skill and Attitude) Competency based Succession and Career planning, Corporate Competency driven Culture. (6+3)

Suggested Text Books:
1. Competency based HRM, Ganesh Shermon, Tata Mc Graw Hill Publishing
2. The handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations, Seema Sanghi, Sage Publication Inc

Suggested Reference Books:
1. Human Capital Measurement: An Introduction, K Sangeetha ICFAI University
2. Competency Mapping, R K Sahu
3. Competency Study: Mapping the Future, Paul R Bernthal, ASTD Press
4. Human resource Management, K Ashwathappa
5. Human Resource Management, L M Prasad
6. Human Resource Management, Gary Dessler

Semester II		206HRM: Employee Relations and Labour Legislations
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO206HRM.1	REMEMBERING	SHOW awareness of important and critical issues in Employee Relations
CO206HRM.2	UNDERSTANDING	INTERPRET and relate legislations governing employee relations.
CO206HRM.3	APPLYING	DEMONSTRATE an understanding of legislations relating to working environment.
CO206HRM.4	ANALYSING	OUTLINE the role of government, society and trade union in ER.
CO206HRM.5	EVALUATING	EXPLAIN aspects of collective bargaining and grievance handling.
CO206HRM.6	CREATING	DISCUSS the relevant provisions of various Labour Legislations.

1. **Introduction**: Background of Employee Relations, Concept, definition, scope, objectives, factors, participants&importance of ER, Approaches to employee relations – The Dunlop's approach, The Social Action Approach, The Human Relations Approach and The Gandhian Approach, Labour policies, role of ILO and its influence on legislation in India. **(5+3)**

2. **Mechanism for harmonious ER**: Collective bargaining - definition, meaning, nature, essential conditions, functions and importance, process and its implementation, Workers participation in management& Problem solving attitude, Grievance,meaning and forms, sources, approaches, procedures, model grievance procedure and grievance handling committees. **(6+3)**

3. **Legislations governing Employee Relations:** The Industrial Disputes Act 1947 – Definition of industry, workmen and industrial dispute, authorities under the act, procedure, powers and duties of authorities, strikes and lockouts, layoff, retrenchment and closure, The Contract Labour (Regulation and Abolition) Act 1970 – Advisory boards, registration of establishment, Licensing of Contractors, Welfare and health of contract labour, registers and other records to be maintained. **(6+3)**

4. **Legislation governing Unions and wages:** The Trade Union Act 1926- Formation and registration of Trade Unions, Principle privileges of a registered trade union, rights of recognised trade unions, types and structure of trade unions, impact of globalisation on trade union movement, Maharashtra Recognition of Trade Union and Prevention of Unfair Labour Practices Act 1971 – Unfair labour practices on the part of Employers and Employees, authorities and punishments under the act, Minimum Wages Act 1948 – Definition of wages, fixation and revision of minimum wages, advisory boards and committees, fixing hours for a normal working day, wages for worker who works for less than normal working day, maintenance of registers and records. **(6+3)**

5. **Legislation governing working environment:** The Factories Act 1948 – Definitions of factory, manufacturing process, worker, occupier; provisions under health, safety and welfare, working hours, annual leave with wages, prohibition of employment of young children, Maharashtra Shops & Establishment (Regulation of Employment and Conditions of Service) Act, 2017 – Scope, Registration of establishments, opening and closing hours, hours of work, interval for rest, spread over, wages for overtime and weekly off, leave with pay and payment of wages and welfare provisions, offences and penalties, Maternity benefit Act, 1961 – Entire Act and latest amendment, The Sexual harassment of women at workplace(Prevention, prohibition and Redressal) Act, 2013 – Definitions of sexual harassment, employee, workplace, complaints committee, complaint mechanism, Aggrieved Woman, Chairperson; Constitution of Internal Complaints Committee, Complaint, Inquiry into complaint, duties of employer. **(7+3)**

Suggested Text Books:
1. Personnel Management, C B Mamoria
2. Dynamics of Personnel Administration, Rudrabaswaraj
3. Personnel Management, Edwin Flippo
4. Industrial and Labour Laws, S. P. Jain

Suggested Reference Books:
1. Guide on Labour Management forms and precedents (Law, Practice and Procedure), S D Puri, Snow white publication
2. Introduction of Labour and Industrial Laws, Avatar Singh
3. Elements of Mercantile Law, N. D. Kapoor, Sultan Chand
4. Bare Acts

Subject Elective (SE) Courses - Semester II Specialization: Human Resource Management		

Semester II		217HRM: Labour Welfare
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217HRM.1	REMEMBERING	ENUMERATE the key concepts of the subject matter.
CO217HRM.2	UNDERSTANDING	DESCRIBE the key aspects of the labour policy regulation in the country.
CO217HRM.3	APPLYING	IDENTIFY the applicability of various legislations to variety of real world organizations.
CO217HRM.4	ANALYSING	EXAMINE the traditional concept of labour welfare in the industry.
CO217HRM.5	EVALUATING	EXPLAIN the conditions of labour and their welfare and social security needs in the country.
CO217HRM.6	CREATING	ELABORATE upon the perspective of labour problems and remedial measures in the country.

1.   **Introduction - Evolution of Labor Welfare :** Origin and evolution of Labour Welfare-objectives of Labour Welfare need and importance of L.W, Classification of Labour Welfare,Work agencies of Labour Welfare, Scope of Labour Welfare, Concepts, philosophy and principles of labour welfare, Plans and labour policy in India and Labour Welfare in India. (4+2)

2.   **Labour Legislations in India:** Statutory Welfare Amenities – as per Factories Act, 1948, Plantation Act, 1951, Motor Act 1952, Motor Transport Act. Non-statutory welfare Agencies – Role of Trade Unions, NGOs and Local-self Govt., National Commission on Labour and Labour Welfare, Labour Laws of the Elimination of Child Labour(4+2)

3.   **Agencies of Labour welfare:** Agencies of Labour welfare in India (Central Govt. , State Govt., Employers & Trade-Unions), Labour Welfare Officer: Role, Qualifications, Functions, Duties, Labour Administration in India (4+2)

4.   **Industrial Hygiene & Occupational Health:** Working condition and benefits, Working conditions in the factory-safety and accident prevention, Health and hygiene, Canteen organization and management, Organization of credit and consumer co-operative societies-recreational and educational actives-workers education in India, Functions of Labour welfare officers India. (4+2)

5.   **Problems of Indian labour:** Problems of Women Labour, Problems of Unorganized labour, Problems of Workers education (4+2)

Suggested Text Books:
1.   Labour Problem and Social Welfare in India, Memoria, C. B., Kitab Mahal Allahabad
2.   Labour Welfare, Trade Unionism and Industrial Relation, Punekar, S. D. , Himalaya Publishing House, Bombay.
3.   Labour Welfare and Social security, Kohli, A. S. and Sarma S. R., Anmol Publications Pvt. Ltd., New Delhi.
4.   Child Labour in India, Misra, L., Oxford University Press, New Delhi.
5.   Personnel Problems and Labour Welfare, Mathur D. C., Mittal Publication. New Delhi.

Suggested Reference Books:
1.   Female Labour in India, Sharma Usha, Mittal Publication New Delhi
2.   Aspects of Labour Welfare and Social Security, A.M.Sharma
3.   Labour Problems and Social Welfare, R.C. Saxena
4.   Labour economics and social welfare, Dr. B.P. Tyag

Semester II		218HRM: Lab in Recruitment and Selection
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO218HRM.1	REMEMBERING	DESCRIBE the key concepts such as Job Specification, Job description, Recruitment and Selection.

CO218HRM.2	UNDERSTANDING	COMPARE and CONTRAST various methods of Recruitment and Selection.
CO218HRM.3	APPLYING	DEVELOP Job Specifications and Job descriptions in a variety of context.
CO218HRM.4	ANALYSING	ANALYZE various Personality types.
CO218HRM.5	EVALUATING	EXPLAIN the profiling techniques used to test Personality, Aptitude, Competency.
CO218HRM.6	CREATING	COMPILE a list of questions for Recruitment and Selection interviews.

1.   **Comparative study of 10 recruitment advertisements** (5 from Newspaper & 5 from job portals) & analysis of the same in the light of : Job Specification/ description, Mode of selection, Other details - Documentation for Recruitment
2.   **Profiling Techniques :** Personality, Aptitude, Competency
3.   **Interviewing:** Study of Interview modes, List of questions for interviewers, Personal, Telephonic.

Suggested Text Books:
1.   Human Resource and Personnel Management, K Aswathappa, Tata McGraw Hill
2.   Effective Recruitment and Selection Practices, Alan Nankervis, Robert Compton, Bill Morrissey.
3.   Recruitment and Selection (Developing Practice), Chartered Institute of Personnel and Development
4.   Successful Interviewing and Recruitment, Rob Yeung, Kogan ,Page Publishers

Semester II		219HRM: Learning & Development
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219HRM.1	REMEMBERING	DESCRIBE the key concepts associated with Learning & Development
CO219HRM.2	UNDERSTANDING	EXPLAIN the training process and the various methods of training for various categories of employees in a variety of organizational contexts.
CO219HRM.3	APPLYING	IDENTIFY training needs of various categories of employees in a variety of organizational contexts.
CO219HRM.4	ANALYSING	EXAMINE the impact of training on various organizational and HR aspects.
CO219HRM.5	EVALUATING	EVALUATE the training process of various categories of employees in a variety of organizational contexts.
CO219HRM.6	CREATING	DESIGN a training programme for various categories of employees in a variety of organizational contexts.

1.   **Learning:** Nature of learning, Learning-its influence on employee behavior, Learning Process, Learning and HRD, Learning styles, elements and Profile, Types of Learning, Adult Learning, Androgogy, Implementing Learning/HRD needs. Introduction to Training: Definition, Concept, Meaning, Nature, Need for Training and Development, Types of Training, Effective Learning and Training. **(4+2)**
2.   **Process of Training:** Identification of job competencies, Training Need Analysis and Assessment, Training for Performance, Steps in Training, Role and Responsibilities of HRD and Training Specialist. **(4+2)**
3.   **Designing and Implementation of Training Plan:** Objectives of Designing Training Plan, Budgeting of Training,Trainer and Trainee Identification, Designing Module, Designing and Conducting Specific Training and Development Programme. Methods of Training: Methods & Technique of Training, On Job Training, and Competency based training, Online Training, E-Learning, Multimedia Training, Management Development Program, New Employee Training. **(4+2)**
4.   **Evaluation of Training Program:** Introduction, concept & principles, Evaluating Training and Results- Kirkpatrick Model of Evaluation, CIRO of Training, ROT of Training, Cost-Benefit analysis. **(4+2)**
5.   **Management Development:** Training and Coaching, Mentoring, Training Practices, Train the trainer, Training for Diversity, Impact of Training on HRD. **(4+2)**

Suggested Text Books:
1.   Employee Training & Development, Raymond Noe
2.   Training and Development, S K Bhatia

3. The ASTD Training and Development Handbook: A Guide to Human Resource Development, Robert Craig, McGraw-Hill.
4. Creative Training Techniques Handbook, Robert W. Pike, CSP

Semester II		220HRM: Public Relations & Corporate Communications
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO220HRM.1	REMEMBERING	DESCRIBE the various forms of Corporate Communications from a HR perspective.
CO220HRM.2	UNDERSTANDING	EXPLAIN the role of Public Relations & Corporate Communications in HRM.
CO220HRM.3	APPLYING	PLAN and EXECUTE a PR activity.
CO220HRM.4	ANALYSING	EXAMINE the PR campaign & strategies of real world organizations.
CO220HRM.5	EVALUATING	DEVELOP a strategic communication plan for a real life Corporate communication issue.
CO220HRM.6	CREATING	COMPLIE an analytical report on the PR activities and communication strategies designed & practiced by the organizations and IMPROVE on it.

1.   **Public Relations & Corporate Communication :** Introduction to corporate communication, Public relations writing-writing to inform, writing to persuade, Design & lay out, Online public relations (4+1)
2.   **Media Relations:** Building maintaining relationship with credibility with media, Developing methodologies for successful practice of media relations (5+1)
3.   **Public Relations: C**oncept, theory, history & practice of public relations, Importance of PR for HR professionals, PR campaign & strategies for PR, Evaluating PR activities (5+1)
4.   **Communication Management** : Presentation skills, Developing strategic communication plan, Synthesizing internal & external initiatives, Event Management (4+1)
5.   **Field Study/ Desk Research:** Student along with faculty are expected to study PR activities and communication strategies designed & practiced by the organizations in the area & prepare a report. (7+1)

Suggested Text Books:
1. Public Relations, Phillip Henslowe, Chartered Institute of PR

Suggested Reference Books:
1. Public Affairs in Practice, Stuart Thomson & Stevee John, Chartered Institute of PR
2. Develop your PR Skills, Neil Richardson& Lucy Laville, The Sunday Times,
3. Creativity in PR, Andy Green, Chartered Institute of PR
4. Running a PR Department, Mike Beard, Chartered Institute of PR

Semester II		221HRM: HR Analytics
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221HRM.1	REMEMBERING	ENUMERATE the key concepts related to the subject matter.
CO221HRM.2	UNDERSTANDING	DEMONSTRATE experimentation and innovation.
CO221HRM.3	APPLYING	USE thinking & decision making ability beyond the existing capabilities and present environment.
CO221HRM.4	ANALYSING	ANALYSE the behavioral Patterns of an individual & Map the competency- the audit Perspective.
CO221HRM.5	EVALUATING	EXPLAIN the innovative and formulate strategies which enhance innovative skills and Promote Innovation.
CO221HRM.6	CREATING	FORMULATE the linkage between HR Analytics and Business Analytics.

1.   **Introduction & Concept:** Disruptive Technological Era: Evolution of Industry Revolution 4.0 and aspect of HR, Big data in HR, understanding of Machine Learning, sensors and cloud computing, Business Intelligence in HR. **(4+2)**

2.   **Importance of HR Analytics:** Role and Responsibilities of HR Analytics, Framework of contemporary HR Analytics,- Predictive tools and Applications in solving problems using HR analytics. Gartners Analytics Maturity Model.**(4+2)**

3.   **Innovation:** Concept of innovation, Kinds of Innovation, Developing Innovative culture in an organization. HR analytics linkage to business outcomes, Measuring use of HR analytics impact on business outcome **(4+2)**

4.   **Strategy Formulation:** Redefining HR Policies and Practices, Robust competency mapping, understanding future of work and workplace, Decision framework. Use of HR analytics in workforce planning: talent acquisition, talent development, talent compensation, talent engagement and retention **(4+2)**

5.   **Learning from Analysis:** Case studies and best practices in use of HR Analytics in industry (5 cases) **(4+2)**

Suggested Text Books:

1.   Winning on HR analytics: Leveraging data for competitive advantage, Ramesh Soundararajan and Kuldeep Singh, Sage Publication

2.   The Practical Guide to HR Analytics: Using Data to Inform, Transform, and Empower HR Decisions Paperback, Shonna D. Waters , Valerie N. Streets , Lindsay Mcfarlane , Rachael Johnson-murray

3.   Human Capital Analytics: How to Harness the Potential of Your Organization's Greatest Asset, Boyce Byerly, Gene Pease, and Jac Fitz-enz

4.   Doing HR Analytics: A Practitioner's Handbook with R Examples, Lyndon, Mr. Sundmar, Createspace Independent Pub

5.   The Power of People: Learn How Successful Organizations Use Workforce Analytics to Improve Business Performance, Guenole Nigel, Ferrar Jonathan, Feinzig Sheri, Pearson Publication

Semester II		**222HRM: Conflict & Negotiation Management**
2 Credits	**LTP: 0:3:1**	**Subject Elective (SE) Course – Human Resource Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO222HRM.1	REMEMBERING	DEFINE the key concepts of the subject matter.
CO222HRM.2	UNDERSTANDING	EXPLAIN the negotiation process, Zone of possible agreement (ZOPA) and Best alternative to a negotiated agreement (BATNA)
CO222HRM.3	APPLYING	APPLY the negotiation process, Zone of possible agreement (ZOPA) and Best alternative to a negotiated agreement (BATNA) for successful negotiations.
CO222HRM.4	ANALYSING	APPRAISE the importance of in business negotiations and managing conflicts.
CO222HRM.5	EVALUATING	DEVELOP the logical thinking, communication skills and other prerequisite for successful business negotiations and handling organizational conflict.
CO222HRM.6	CREATING	COMBINE the theoretical concepts practical methods of managing and resolving organizational conflict and negotiation styles in the organizational context.

1.   **Fundamentals of Negotiation:**   definition: Introduction to the importance of negotiation, its importance andNature of negotiation, negotiation Vs other interactions, Dimensions of Negotiation, Structure and the prerequisites of successful negotiation, types of negotiation , Strategy & planning of negotiation, four stage model of negotiation. **(4+2)**

2.   **Negotiation Process:** Perception & Preparation for the negotiations, goal setting for the negotiation , options and criteria for negotiation, role of Communication& Influence in the negotiation process , Identifying BATNA (Best alternative to a negotiated agreement) and ZOPA (zone of possible agreement) in the negotiation process , Ethics in negotiation, Agreement **(4+2)**

3.   **Negotiation styles:** Leigh Thompson's 5 negotiation mental models, importance of establishing trust and building a Relationship in negotiation , Win-Win Negotiation, use of creativity and problem Solving in Negotiations, application of Transactional analysis for negotiations.**(4+2)**

4.   **Conflict Management:** Introducing the concept of conflict management,Definition, importance and Models of conflict (Process & Structural), Sources of conflict, analyze the relationship between conflict & performance in team,

Advantages & Disadvantages of Conflict. Creating conducing climate to resolve the conflict, apply the fundamentals of conflict management to build teams in the organizations, design the process for conflict management and create the situations to minimize the conflicts in an organizations. **(4+2)**

5.   **Types of Conflicts:** understanding the importance of developing mechanism to manage conflicts in the organizations,   managing interpersonal and intra personal conflict, and conflict resolution, dealing with difficult subordinates, boss & colleagues, evaluate the organization conflict, analyze the techniques to resolve team conflict, creating the strategies tomanage organizational conflict, understand the concept of third party conflict resolution (ADR), demonstrate the use of third party conflict resolution (ADR). Simulation: Case study on best business negotiations and conflict management, Role Play**. (4+2)**

Suggested Text Books:
1.   Negotiation: Communication For Diverse Settings, Spangle, Michael L. ; Isenhart, Myra Warren : Sage Publications
2.   The Negotiation Field book Simple Strategies to Help you negating everything, Grande, Lum. New Delhi : TATA MCGRAW HILL Publishing Company Limited
3.   Negotiation / Harvard Business Essentials. U S A, Harvard Business Publishing Corporation
4.   How to Conduct Effective Negotiations, Forsyth, Patrick   Jaico Publishing House
5.   Managing Workplace Conflicts, Subbulakshmi,V., Hyderabad : ICFAI University Press
6.   The Power of Positive Confrontation : The Skills You Need To Know To Handle Conflicts At Work, At Home And In Life, Pachter, Barbara . Magna Publishing Co. Ltd.

Suggested Reference Books:
1.   Getting to Yes: Negotiating Agreement without Giving In, Roger Fisher, WilliamUry, Bruce Patton
2.   Bargaining for Advantage: Negotiation Strategies for Reasonable People, G. Richard Shell
3.   Secrets of Power Negotiating: Inside Secrets from a Master Negotiator, Roger Dawson

Subject Core (SC) Courses - Semester II
Specialization: Operations & Supply Chain Management

Semester II		205OSCM: Service Operations Management – I
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO205OSCM.1	REMEMBERING	DESCRIBE the nature and CHARACTERISTICS of services and the services economy.
CO205OSCM .2	UNDERSTANDING	DESRCIBE the service design elements of variety of services.
CO205OSCM .3	APPLYING	USE service blueprinting for mapping variety of real life service processes.
CO205OSCM .4	ANALYSING	ANALYSE alternative locations and sites for variety of service facilities.
CO205OSCM .5	EVALUATING	JUDGE and EXPLAIN the service orientation at variety of service facilities / organizations.
CO205OSCM .6	CREATING	CREATE flow process layouts for variety of services.

1.   Understanding Services: The Service Economy, Service Definitions, Facilitating Role of Services in an Economy, Economic Evolution, Stages of Economic Development, Nature of the Service Sector, The Experience Economy, Consumer Service Experience, Business Service Experience, Service-Dominant Logic, Distinctive Characteristics of Service Operations - Customer Participation, Simultaneity. Perishability, Intangibility, Heterogeneity, Non-transferrable Ownership. The Service Package, Grouping Services by Delivery Process, Open-Systems View of Service Operations Management. **(7+2)**

2.   Designing the Service Enterprise: New Service Development, Sources of Service Sector Growth, Information Technology, The Internet as a Service Enabler, Innovation, Changing Demographics, Innovation in Services, New Service Development, Technology in Service Innovation, Challenges of Adopting New Technology in Services, Readiness to Embrace New Technology, Service Design Elements, Customer Value Equation, Strategic Positioning through Process Structure, Service Blueprinting, Taxonomy for Service Process Design, Degree of Divergence, Object of the Service Process, Type of Customer Contact, Generic Approaches to Service System Design, Production-Line Approach, Customer as Co-producer, Customer Contact Approach, Information Empowerment, Intellectual Property. **(7+2)**

3.   The Service Encounter: Concept of the Service Encounter, Role of Technology , The Emergence of Self-Service, The Service Encounter Triad, Encounter Dominated by the Service Organization, Contact Personnel-Dominated Encounter, Customer-Dominated Encounter, The Service Organization, Culture, Empowerment, Control Systems, Customer Relationship Management, Contact Personnel - Selection & Training , Creating an Ethical Climate. The Customer Expectations and Attitudes, The Role of Scripts in Coproduction, Creating a Customer Service Orientation, Service Profit Chain. **(7+2)**

4.   Service Facility Location: Strategic Location Considerations, Competitive Clustering, Saturation Marketing, Marketing Intermediaries, Substitution of Communication for Travel, Separation of Front from Back Office, Impact of the Internet on Service Location, Site Considerations, Geographic Information Systems, Facility Location Modeling Considerations, Geographic Representation, Number of Facilities, Optimization Criteria, Facility Location Techniques, Cross-Median Approach for a Single Facility, Huff Model for a Retail Outlet, Location Set Covering for Multiple Facilities, Regression Analysis in Location Decisions. **(7+2)**

5.   Service Facility and Process Flows: Environmental Psychology and Orientation, Servicescapes , Behaviors in Servicescapes, Environmental Dimensions of Servicescapes, Facility Design, Nature and Objectives of Service Organizations, Land Availability and Space Requirements, Flexibility, Security, Aesthetic Factors, The Community and Environment. Process Analysis, Types of Processes, Flowcharting, Gantt Chart, Process Terminology, Facility Layout, Flow Process Layout and the Work Allocation Problem, Job Shop Process Layout and the Relative Location Problem. **(7+2)**

Suggested Text Books:
1.   Successful Service Operations Management, Metter, King–Metters, Pulliman& Walton, Thomson India
2.   Service Management, Fitzsimmons and Fitzsimmons, Irwin/McGraw-Hill
3.   Services Marketing Operations and Management, Vinnie J Juhari, Kirti Dutta, Oxford University Press
4.   Services Sector Management An Indian Perspective, C. Bhattacharjee

5.   Services Business Management, Dr. Abhay Kulkarni, Himalaya Publication.

Suggested Reference Books:
1.   Service operations management - Improving service delivery, Robert Johnston, Graham Clark, Pearson Publication
2.   Baldrige – Just What the Doctor Ordered, Quality Progress, Nelson

Semester II		**206OSCM: Supply Chain Management**
3 Credits	LTP: 2:1:1	**Subject Core (SC) Course – Operations & Supply Chain Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO206OSCM.1	REMEMBERING	DESCRIBE the key concepts of Supply Chain Management and the – driving forces in contemporary Supply Chain Management.
CO206OSCM.2	UNDERSTANDING	EXPLAIN the structure of modern day supply chains.
CO206OSCM.3	APPLYING	IDENTIFY the various flows in real world supply chains.
CO206OSCM.4	ANALYSING	COMPARE and CONTRAST push and pull strategies in Supply Chain Management.
CO206OSCM.5	EVALUATING	EXPLAIN the key Operational Aspects in Supply Chain Management.
CO206OSCM.6	CREATING	DISCUSS the relationship between Customer Value and Supply Chain Management.

1.   **Supply Chain Structure:** Shift from enterprise to network, Structure of a SC, Push based SC, Pull based SC, Tradeoff between Push & Pull, Identifying appropriate Push & Pull Strategy for SC, Commodity & cost centric SC, Agile SC **(7+2)**
2.   **Flows in SC:** Forward & Reverse SC, Product, Services, Information, Funds, Demand, Forecast flows in Upstream & Downstream direction **(7+2)**
3.   **Total SCM:** Changing business landscape – driving forces: Shift from Operations to Services, Impact of globalization & technological revolution, Shift from linear SC to collaborative networks, power shifts in the SC- demands for flexibility of partnerships, core competencies, growth in outsourcing, Increased complexity of processes **(7+2)**
4.   **SCM Building Blocks**: Overview of customer focus & demand, resources & capacity management, procurement & supplier focus, inventory management, operations management, distribution management in SCM**.** Key Operational Aspects in SC**:** Creating the Lean SC – JIT Purchasing, JIT Transportation and JIT Production. Kanban, VMI. **(7+2)**
5.   **Customer Value:** Empowered consumer, Customer focused Marketing & SC service outputs, customer service – availability, operational performance, reliability. Customer satisfaction – customer expectations, enhancing customer satisfactions, limitations of customer satisfaction. Customer success – achieving customer success, value added services, customer value requirement mapping, CRM. **(7+2)**

Suggested Text Books:
1.   Supply Chain & Logistics Management, Bowersox, Closs & Cooper, Tata McGraw Hill
2.   Designing & Managing the SC – Concepts, Strategies & Case studies, Levi, Kaminsky et. al., Tata McGraw Hill
3.   Supply Chain Management: Strategy Planning & Operations, Sunil Chopra, Peter Meindl, Pearson

Suggested Reference Books:
1.   Supply Chain Management Process, System & Practice, N.Chadrasekaran, Oxford
2.   Total Supply Chain Management, Basu & Wright, Elsevier
3.   Logistics Management & Strategy, Harrison and van Hoek, Prentice Hall
4.   Supply Chain Management, Mentzer, Response Books.
5.   Logistics Management: The Supply Chain Imperative, Vindo Sople, Pearson Education.

Subject Elective (SE) Courses - Semester II
Specialization: Operations & Supply Chain Management

Semester II		217OSCM: Planning & Control of Operations
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217OSCM.1	REMEMBERING	DESCRIBE the building blocks of Planning & Control of Operations.
CO217OSCM.2	UNDERSTANDING	EXPLAIN the need for aggregate planning and the steps in aggregate planning.
CO217OSCM.3	APPLYING	MAKE USE OF the various forecasting approaches in the context of operations planning process.
CO217OSCM.4	ANALYSING	ILLUSTRATE how capacity planning is done in organizations and its relationship with MRP.
CO217OSCM.5	EVALUATING	EXPLAIN the importance of scheduling in operations management.
CO217OSCM.6	CREATING	CREATE a Bill of Materials.

1.   **Planning & Control of Operations:** Need, Functions - Routing, Scheduling, shop loading and dispatch, follow up. Relations with other departments, Routing-Process layout indicating flow Chart of material from machine to machine. Dispatch in production control-documentation. **(5+1)**

2.   **Demand Forecasting:** Forecasting as a planning tool, Why do we forecast, Forecasting time horizon, Design of forecasting systems, Developing the logic of forecasting, Sources of data, Models for forecasting, Extrapolative methods using time series, Causal methods of forecasting, Accuracy of forecasts, Using the forecasting system. **(5+1)**

3.   **Aggregate Production Planning:** Planning Hierarchies in operations, Aggregate Production planning, Need for Aggregate Production planning, Alternatives for managing demand, Alternatives for managing supply, Basic strategies for aggregate production planning, Aggregate production planning methods, Master Production Scheduling. **(5+1)**

4.   **Resources Planning:** Dependent Demand Attributes, Planning a framework – the basic building blocks: Multiple levels in products, Product Structure, The Bill of Materials, Time phasing of the requirements, Determining the Lot Size, Incorporating Lead time information, Establishing the planning premises. MRP Logic, Using the MRP system, Capacity Requirements planning, Manufacturing Resources Planning (MRP II), Enterprise Resource Planning (ERP), Resource Planning in services. **(5+1)**

5.   **Scheduling of Operations:** Need for Scheduling, Scheduling – Alternative terms, Loading of machines, Scheduling Context, Scheduling of Flow Shops, Scheduling of Job Shops, Input-Output Control, Operational Control Issues in Mass production systems. **(5+1)**

Suggested Text Books:
1.   Operations Management: Theory and Practice, B Mahadevan, Pearson.
2.   Operations Management, Terry Hill, Palgrave
3.   The Fundamentals of Production Planning and Control, Stephen Chapman, Pearson
4.   Operations Now, Byron Fitch, TMGH.

Semester II		218OSCM: Productivity Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO218OSCM.1	REMEMBERING	DEFINE various types of productivity and measures of productivity.
CO218OSCM.2	UNDERSTANDING	DEMONSTRATE the linkages between various measures of productivity.
CO218OSCM.3	APPLYING	APPLY Value Analysis and Value Engineering principles to simple situations related to operations management.
CO218OSCM.4	ANALYSING	APPLY various types of charts and diagrams to carry out work study and method study.

| CO218OSCM.5 | EVALUATING | DETERMINE the Standard Time using Techniques of Work Measurement. |
| CO218OSCM.6 | CREATING | ELABORATE upon the concepts of JIT, Lean, 5S, TPM, BPR, Six Sigma, World Class manufacturing. |

1. **Introduction**: Importance and significance of productivity, Productivity concepts – Macro and Micro factors of productivity, productivity from product and service perspective, different inputs and productivity measures, Various ratios related to finance, material and service. **(3+1)**

2. **Value Analysis and Value Engineering:** Concept of Cost, Price and Value, Role in Productivity, Procedure – Application and productivity benefit model. **(3+1)**

3. **Work Study**: Importance of work study – Method Study and Work Measurement – Pioneers of Performance Measurement. **Method Study**: Need for Method Study – Procedure of Method Study –Process Flow charts, Man machine diagrams ,Principles of Motion Economy. **(6+1)**

4. **Work Measurement:** Techniques of Work Measurement including Estimating, Stopwatch Time Study, Predetermined Time Standards, Synthetic Estimates of Work, Times, Activity Sampling. Computation of Standard Time – Elements – Types of Elements – Performance Rating – Allowances – Need for Allowances – Types of Allowances. **(8+1)**

5. **Advanced Methods of Productivity and service level enhancements**: Overview of JIT, Lean, 5S, TPM, BPR, Six Sigma, World Class manufacturing, Use of Technology in productivity and service enhancements: ITeS, CAD, CAM, CIM, CMMI. **(5+1)**

Suggested Text Books:
1. Productivity Measurement for Business Excellence, Prem Vrat, G.D. Sardana, B.S. Sahay, Narosa Publishing House.
2. Operations Management for Competitive Advantage, Richard B Chase, Jacobs, Aquilano, Agarwal,
3. Introduction to Work Study, Editor - Geirge Kanawaty, Universal Publishing
4. Production and Operations Management, S.N.Chary, TMGH

Semester II		219OSCM: Inventory Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219OSCM.1	REMEMBERING	DEFINE the key terms associated with Inventory Management.
CO219OSCM.2	UNDERSTANDING	CLASSIFY various types of inventory, and inventory costs.
CO219OSCM.3	APPLYING	CALCULATE Economic Order Quantity and stock levels under various conditions.
CO219OSCM.4	ANALYSING	COMPARE and CONTRAST various methods of inventory control.
CO219OSCM.5	EVALUATING	ASSESS various factors influencing Make or Buy decisions.
CO219OSCM.6	CREATING	SOLVE problems based on ABC classification of inventory.

1. **Elements of Inventory Management:** Inventory concepts, Pressures for Low Inventory, Pressures for High Inventory, Role of inventory in Operations, Types of inventory – seasonal, decoupling, cyclic, pipeline, Safety stock. Inventory costs – carrying costs, ordering costs, shortage costs. **(5+1)**

2. **Inventory Control systems:** Continuous Review (Q) systems, Periodic Review (P) systems, ABC Classification system, Issues in the P and Q systems of inventory control. **(5+1)**

3. **Economic Order Quantity Models:** The Basic EOQ Model, Production Quantity Model, Computer Solution of EOQ model with MS Excel, Quantity Discounts, Computer Solution of Quantity Discounts model with MS Excel, Reorder Point, Safety Stocks, Service Level, Reorder point with variable demand, Computer Solution of Reorder point with MS Excel, Order quantity for periodic inventory system, Order quantity with variable demand, Computer Solution of fixed period model with MS Excel. **(5+1)**

4. **Just-In-Time:** Principles of just-in-time, Core logic of JIT, Main features for stocks, Achieving just-in-time operations, Other effects of JIT, Benefits and disadvantages of JIT, Comparison with other methods of inventory management. KANBAN as a control tool. Vendor managed inventory. **(5+1)**

5. **Make Or Buy Decisions:** Factors influencing Make Or Buy Decisions-cost, quality, capacity core v/s noncore, management strategy. Evaluation of performance of Materials function: cost, delivery, quality, methodology of evaluation, Use of ratios - inventory ratios, inventory analysis like ABC, FSN: Fast slow, Nonmoving, HML-High Medium, Low, XYZ. Materials Management In JIT Environment. **(5+1)**

Suggested Text Books:
1. Operations Management: Theory and Practice, B Mahadevan, Pearson.
2. Operations Management-Process and Value Chains, Krajewski, Ritzman, Malhotra, Pearson.
3. Operations Management: Quality and Competitiveness in a Global Environment, Russell and Taylor, Wiley India.

Suggested Reference Books:
1. Introduction to Materials Management, J.R.Tony and Arnold.
2. Inventory Control and Management, Donald Waters, Wiley Student Edition.
3. Just-in-Time Manufacturing, Korgaonker, Macmillan
4. Essentials of Inventory Management, Max Muller, JAICO Publishing

Semester II		220OSCM: Theory of Constraints
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO220OSCM.1	REMEMBERING	DEFINE the key concepts of TOC.
CO220OSCM.2	UNDERSTANDING	DEMONSTRATE knowledge & understanding of the fundamentals of TOC.
CO220OSCM.3	APPLYING	IDENTIFY and mitigate both real constraints and managerial constraints.
CO220OSCM.4	ANALYSING	ILLUSTRATE the tools and techniques that help in managing constraints to improve organizational performance.
CO220OSCM.5	EVALUATING	EXPLAIN the benefits an organization may reap through the successful implementation of the TOC.
CO220OSCM.6	CREATING	DEVELOP solutions to common problems in Project Management, Operations Management and Supply Chain Management using TOC principles and methods.

1. **Thinking Process:** Introduction to Theory of Constraints (TOC), Tools of TOC, Where is TOC applicable? What is a constraint, TOC's thinking process and Human Being, Terminology used in the thinking process, Steps to implement in the thinking process, Current Reality Tree, Conflict Resolution Diagram, Future Reality Tree, Prerequisite Tree, Transition Tree, Three Cloud Method. **(5+1)**
2. **Finance and Measures:** Economic Decisions, TOC and Product Costing, Economic Decisions using TOC Costing. **(5+1)**
3. **Project Management:** Phases of Project Management, Common problems in Project Environment, Critical Chain project Management – A TOC approach. **(5+1)**
4. **Drum-Buffer-Rope Solution:** Introduction, The Drum – The MPS of the Capacity Constraint Resource, Implementing Drum-Buffer-Rope, Implementing Drum-Buffer-Rope on the shop floor, MPS using Drum-Buffer-Rope Scheduling method. **(5+1)**
5. **Theory of Constraints in Supply Chain Management:** Introduction, TOC in distribution Solution, Drum-Buffer-Rope in distribution. **(5+1)**

Suggested Text Books:
1. Theory of Constraints by S K Mukhopadhyay, Jaico Books.
2. The Goal by E M Goldratt and Cox J, Great Barrington, North River

Suggested Reference Books:
1. What is the thing called Theory of Constraints? by E M Goldratt, Great Barrington, North River
2. It's Not Luck by E M Goldratt, Great Barrington, North River
3. Essays on Theory of Constraints by E M Goldratt, Great Barrington, North River
4. Critical Chain by E M Goldratt, Great Barrington, North River

Semester II		221OSCM: Quality Management Standards
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221OSCM.1	REMEMBERING	DESCRIBE the concepts of Quality and importance of the Quality Management Principles.
CO221OSCM.2	UNDERSTANDING	INTERPRET the requirements of ISO 9001:2015 standard.
CO221OSCM.3	APPLYING	APPLY process based thinking and risk based thinking for managing and improving the functioning of an organization.
CO221OSCM.4	ANALYSING	TAKE PART IN planning, conducting and follow-up of QMS audits directed towards maintenance and continual improvements of the QMS.
CO221OSCM.5	EVALUATING	DEVELOP skills for Corrective Action Management and Continual Improvement Project management.
CO221OSCM.6	CREATING	BUILD stakeholder confidence by managing processes in line with the latest requirements.

1. **Quality Management Systems:** Quality, Quality Concepts, Concepts and Characteristics of Quality as a Business Imperative, Quality Management Systems Map, Advantages of the Quality Management Systems, Process approach, Seven Quality Management Principles, Organization and it's Context, Needs and Expectations of Interested Parties. Need for Quality Management System, Management System Standards (MSS), High Level Structure (HLS), Integrated Management Systems, Risk Management, How processes affect each other, The Plan – Do – Check (Study) – Act Cycle (PDCA) and terminology; PDCA and its relation in business processes , Quality Policy and Objectives at all functions and levels. **(5+1)**

2. **ISO Standards:** QMS: ISO 9001 Useful Terms, ISO Supporting Standards, Understanding the terms and definitions of the ISO 9001: 2015 standard, Broad overview of the requirements of ISO 9001: 2015, The principles, structure and language of ISO 9000 and ISO 9001, Applying the ISO 9001: 2015 standard when developing and implementing a QMS. **(5+1)**

3. **Documentation and Implementation Planning:** Phased Approach Method and Tools, Executive and Management Overview, Planning, Gap Assessment and Planning, Documentation, Implementation and Training, Internal Assessment and Management Review, 3rd Party Registration Assessment, Sustain and Continual Improvement. **(5+1)**

4. **Risk Assessment:** Concept and principles of Risk Assessment, Risk Based Thinking and Management Responsibility within an effective QMS, Applying the Framework of Risk Assesment, Understand the differences between the different techniques - Root Causal Analysis, Failure Modes and Effects Analysis (FMEA), Hazard Analysis and Critical Control Points (HACCP), Capability Index. **(5+1)**

5. **Internal Audit :** Understanding and application of Internal Audit Process requirements, Planning the Audit, Scheduling the Audit, Preparing the Audit, Conducting the Audit, Documenting Audit Findings, Reporting Audit Findings, Corrective Action Follow-up, Auditing practices and techniques ,Role plays and/or scenarios to relevant field, The personal and interpersonal skills and competencies required for auditing. **(5+1)**

Suggested Text Books:
1. Mastering ISO 9001:2015: A Step-By-Step Guide To The World's Most Popular Management Standard, Gregory Peckford
2. Understanding ISO 9001: 2015 Quality Management System, Virendra Kumar Gupta
3. ISO 9001: 2015 - A Complete Guide to Quality Management Systems, Itay Abuhav
4. Operations Management: An Integrated Approach, Danny Samson and Prakash Singh, Cambridge University Press.
5. Managing Quality, Barrie G Dale, Ton van der Wiele and Jos van Iwaarden (Editors),Blackwell Publishing
6. ISO 9001:2015 Standard

Semester II		222OSCM: Service Value Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO222OSCM.1	REMEMBERING	DEFINE the core concepts related to Service Value Chain, Service Profit Chain, Innovation, CRM, networks.
CO222OSCM.2	UNDERSTANDING	ILLUSTRATE managing the service process through service value chain.

CO222OSCM.3	APPLYING	IDENTIFY factors influencing Innovation and service organizational design.
CO222OSCM.4	ANALYSING	EXAMINE the inter-relationships between the Focal firm, Supplier Networks, Distribution Networks, etc.
CO222OSCM.5	EVALUATING	EVALUATE the role of Business Networks as partners in value creation.
CO222OSCM.6	CREATING	DEVELOP strategies built on Principles of Service Value Chain & Service Profit Chain for various types of organizations.

1.   **Basic Concepts, Value, Value Processes,** Creating service value, Defining the benefit part of service value- the service product, Value creation by services marketing, Evaluating internal customer value leading to external customer satisfaction, Costing of Services- Defining the cost part of service value: service pricing, Delivering service value - Managing service delivery**. (5+1)**

2.   **Service Value Chain** & **Service Profit Chain:** Introduction, Definitions, Significance, Managing the service process through service value chain, service value chain and service profit chain, Key elements of service profit chain – customer loyalty and satisfaction, understanding value from customer perspective, dream team cycle**. (5+1)**

3.   **Value Chain Service Innovations:** Introduction, Components, Types, Models, Processes of Innovation, Evolution and Characteristics of Innovation Management, Key drivers, Factors influencing Innovation, Organizing for Innovation, Factors influencing service organizational design, Developing Innovation Strategy**. (5+1)**

4.   **Managing Networks:** What is a Network? Business Networks, Network Position, Concept of Focal firm, Business Networks and CRM, Supplier Networks, Distribution Networks, Management of Networks, Supplier Relationships, Product Development, Supplier Accreditation Programmes, Process Alignment, E Procurement, Partners in Value Creation, Alliance between non-competing firms, Alliance between competing firms, Benchmarking Partners, Customer Advocacy groups, Sponsors, Partners in Value Delivery. IT Enabled Customer Services - Call Centre Operations and Management, Web-enabled Services, ERP enabled Field and Technical Support Services, Tele marketing and servicing**. (5+1)**

5.   Case Studies related to Service Value Chain in Banking & Insurance, Hospital and Health Care, Travel & Tourism, Hotel & Catering, Retail and Contractual Services**. (5+1)**

Suggested Text Books:
1. Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction and Value, W. Earl Sasser , Leonard A. Schlesinger, James L. Heskett
2. Competitive Advantage, Porter, Michael E, The Free Press. New York.
3. Strategic Management: a Methodological Approach, Rowe, Mason, Dickel, Mann, Mockler; Addison-Wesley

		Subject Core (SC) Courses - Semester II
		Specialization: Business Analytics

Semester II		205BA: Basic Business Analytics using R
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO205BA.1	REMEMBERING	IDENTIFY opportunities for creating value using business analytics and DESCRIBE the basic concepts in Business Analytics, DATA Science and Business Intelligence.
CO205BA.2	UNDERSTANDING	EXPLAIN the applications of Business Analytics in multiple business domains and scenarios.
CO205BA.3	APPLYING	DEVELOP a thought process to think like a data scientist/business analyst.
CO205BA.4	ANALYSING	ANALYZE data graphically by creating a variety of plots using the appropriate visualization tools of R.
CO205BA.5	EVALUATING	SELECT the right functions of R for the given analytics task.
CO205BA.6	CREATING	COMBINE various tools and functions of R programming language and use them in live analytical projects in multiple business domains and scenarios.

1.   **Business Analytics Basics:** Definition of analytics, Evolution of analytics, Need of Analytics, Business analytics vs business analysis, Business intelligence vs Data Science, Data Analyst Vs Business Analyst, Types of Analytics, Tools for Analytics. Concept of insights. Importance of data in business analytics, Differences between data, information and knowledge, various stages of an organization in terms of data maturity, Options for organizations in the absence of good quality data. **(5+1)**

2.   **Analytical decision-making:** Analytical decision-making process, characteristics of the analytical decision-making process. Breaking down a business problem into key questions that can be answered through analytics, Characteristics of good questions, Skills of a good business analyst, Overview of Business analytics applications in - Marketing Analytics, HR Analytics, Supply Chain Analytics, Retail Industry, Sales Analytics, Web & Social Media Analytics, Healthcare Industry, Energy Analytics, Transportation Analytics, Lending Analytics, Sports Analytics. Future of Business Analytics. **(5+1)**

3.   **Fundamentals of R:** R environment, Downloading and Installing R, Using command line in R, Help, File operations in R -Reading from and Writing to a file, Writing your first code in R, Importing data from spreadsheets, text files, SAS, SPSS, Connect to RDBMS from R using ODBC, basic SQL queries in R, Exploration and transformation activities, basics of Web Scraping. **(6+1)**

4.   **Data types & Data Structures in R:** Data types in R and its appropriate uses, Program Structure in R, Flow Control: For loop, If condition, While conditions and repeat loop, Debugging tools, Concatenation of Data, Combining Vars , cbind, rbind, Sapply, apply, tapply functions, Built-in functions in R like: seq(), cbind (), rbind(), merge(), knowledge on the various subsetting methods, summarize data by using functions like: str(), class(), length(), nrow(), ncol(), use of functions like head(), tail(), for inspecting data, summarize data, SQL join in R. Introduction to Data Structure in R, Vectors, Lists, Scalars, Data Frames, Matrices, Arrays, Factors, Use of data structures in different conditions, Advantage of using a particular approach. **(10+3)**

5.   **Data Visualization:** Concept of Data Visualization, Popular Data Visualization tools, Exploratory Data Analysis(EDA), Data Cleaning, Data Inspection, uses of the functions like grepl(), grep(), sub(), summarize(), llist(), Using graphical functions in R for data visualization, Line Plots, Bar Plots, Bar Plots for Population, Pie chart, tableplot, histogram, Plotting with base graphics, Plotting with Lattice graphics, Plotting and coloring in R. Customizing Graphical Parameters to improvise plots, understanding GUIs like Deducer and R Commander, introduction to Spatial Analysis. **(10+3)**

Suggested Text Books:
1.   R for Business Analytics, A Ohri
2.   Data Analytics using R, Seema Acharya, TMGH
3.   Data mining and business analytics with R, Johannes Ledolter. New Jersey: John Wiley & Sons.
4.   Data Mining for Business Intelligence, Concepts, Techniques and Applications,Shmueli, Patel,and Bruce: Wiley

Suggested Reference Books:

1. Statistical data analysis explained: applied environmental statistics with R, Clemens Reimann. Chichester: John Wiley and Sons
2. Data science in R: a case studies approach to computational reasoning and problem solving, Deborah Nolan. Boca Raton: CRC Press
3. The analytics revolution: how to improve your business by making analytics operational in the big data era, Bill Franks. Hoboken: Wiley
4. Taming the big data tidal wave: finding opportunities in huge data streams with advanced analytics, Bill Franks. Hoboken: John Wiley & Sons.
5. Big data, big analytics: emerging business intelligence and analytic trends for today's business, Michael Minelli. Hoboken: John Wiley & Sons

Semester II		206BA: Data Mining
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO206BA.1	REMEMBERING	DEFINE the key terms associated with Data Mining
CO206BA.2	UNDERSTANDING	EXPLAIN the various aspects of Data
CO206BA.3	APPLYING	APPLY classification models
CO206BA.4	ANALYSING	ANALYSE using clustering models
CO206BA.5	EVALUATING	SELECT appropriate association analysis and anomaly detection tools.
CO206BA.6	CREATING	COMBINE various data mining tools and use them in live analytical projects in business scenarios.

1. **Basic Concepts:** Concept, Definitions and Need of Big Data, Data Mining, Business Intelligence. Data Mining Process, relation to Business Intelligence techniques. Introduction to Data Mining Tasks (Classification, Clustering, Association Analysis, Anomaly Detection). Concept, Definitions of model, descriptive models, predictive modeling, basic terminology.Real-world data mining applications - Big Data Analytics in Mobile Environments, Fraud Detection and Prevention with Data Mining Techniques, Big Data Analytics in Business Environments. **(6+1)**
2. **Data and Preprocessing:** Understanding of Data, what is data? Types of attributes, properties of attribute values, types of data, data quality, Sampling, Data Normalization, Data Cleaning, Similarity Measures, Feature Selection/Instance Selection, the importance of feature selection/instance selection in various big data scenarios. **(7+1)**
3. **Classification:** Decision-Tree Based Approach, Rule-based Approach, Instance-based classifiers , Support Vector Machines, Ensemble Learning, Classification Model Selection and Evaluation, Applications: B2B customer buying stage prediction, Recommender Systems. **(9+1)**
4. **Clustering:** Partitional and Hierarchical Clustering Methods, Graph-based Methods, Density-based Methods, Cluster Validation, Applications: Customer Profiling, Market Segmentation. **(9+1)**
5. **Association Analysis:** Apriori Algorithm and its Extensions, Association Pattern Evaluation, Sequential Patterns and Frequent Subgraph Mining, Applications: B2B Customer Buying Path Analysis, Medical Informatics, Telecommunication alarm diagnosis. **Anomaly Detection:** Statistical-based and Density-based Methods , Ethics of data mining, privacy, what can/do firms know? **(9+1)**

Suggested Text Books:
1. Data Mining: The Textbook by Charu C. Aggarwal
2. Data Science for Business by Foster Provost and Tom Fawcett, O'Reilly
3. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach, Vipin Kumar, Addison Wesley
4. Data Mining and Analysis: Fundamental Concepts and Algorithms by Mohammed J. Zaki and Wagner Meira

Subject Elective (SE) Courses - Semester II
Specialization: Business Analytics

Semester II		217BA: Marketing Analytics
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217BA.1	REMEMBERING	DESCRIBE the use of Voice of the Customer data in making data driven marketing decisions.
CO217BA.2	UNDERSTANDING	DEMONSTRATE an understanding of utility theory to measure customer preferences and choices.
CO217BA.3	APPLYING	IDENTIFY what customers' value in a product, and assess what they are willing to pay for it.
CO217BA.4	ANALYSING	ILLUSTRATE the use of various tools and frameworks to solve strategic marketing problems using marketing data.
CO217BA.5	EVALUATING	DETERMINE the most effective target markets.
CO217BA.6	CREATING	DESIGN a study that incorporates the key tools of Marketing Analytics.

1.   **Segmentation Analytics:** Market Segmentation Variables, Market Segmentation Types, Marketing Data Landscape, Data for Segmentation, Analytics for Need Based Segmentation - Voice of the Customer, Managing "Voice of the Customer" Data, Customer Co-Creation, RFM Analysis, Life Cycle Segmentation, Cross Tabulation Segmentation, Regression based segmentation, Clustering, Conjoint Analysis Segmentation, The Cluster Analysis + Discriminant Analysis Approach, **(5+1)**
2.   **Approaches to Choosing Target Segment/s:** Rationale for Segment Targeting, Analytics for Perceptual Mapping and Product Positioning, Product Positioning, Multi Dimensional Scaling (MDS) and Factor Analysis, Relevance of Mapping for Product Positioning, Preference Mapping, Incorporating Preferences in Perceptual Mapping. **(5+1)**
3.   **Analytics for Product/Service Design**: The Relevance of Trade-off Approaches, Conjoint Analysis, Approaches to Conjoint Analysis, Interpreting Conjoint Results, Optimizing Design using Conjoint Results. **(5+1)**
4.   **Analytics for Tracking Customer Growth:** Rationale for Customer Analytics, Customer acquisition cost, Customer Churn, Customer Attrition models, Customer lifetime value, Net promoter score, Calculating the number of new customers, Calculating average customer age & Days to convert, Calculating customer acquisition cost & Average purchases, Calculating touch points & Lead conversion, Analyzing age demographics, First contact with customer, Customer satisfaction, Understanding customer engagement, Diffusion Models - The Bass Model. **(5+1)**
5.   **Modeling New Marketing Initiatives:** Introduction to modeling, Evaluating new ad channels, Modeling tips and best practices, Projecting ad revenue, Projecting organic follower revenue, Projecting expenses, Calculating net profit and breakeven, Understanding ROI, Calculating returns, Creating a single-variable sensitivity table, Creating a multi-variable sensitivity table. **(5+1)**

Suggested Text Books:
1.   Marketing Analytics: Data-Driven Techniques with Microsoft Excel, Wayne L. Winston
2.   Marketing Analytics: Strategic Models and Metrics, Stephan Sorger
3.   Marketing Analytics: A Practical Guide to Improving Consumer Insights Using Data Techniques, Mike Grigsby
4.   Cutting-edge Marketing Analytics: Real World Cases and Data Sets for Hands on Learning, Paul Farris, Rajkumar Venkatesan, and Ronald T. Wilcox

Semester II		218BA: Retailing Analytics
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO2018BA.1	REMEMBERING	ENUMERATE the characteristics, opportunities and challenges of New Age Retailing and Digital Consumers.

CO2018BA.2	UNDERSTANDING	UNDERSTAND Consumer Buying Behavior and Trends in new age retailing.
CO2018BA.3	APPLYING	USE various kinds of data for performing Retailing Analytics.
CO2018BA.4	ANALYSING	ILLUSTRATE the use of various tools and frameworks for predictive retail analytics.
CO2018BA.5	EVALUATING	DERIVE a variety of metrics and quantify key outcomes in multiple areas of Retail.
CO2018BA.6	CREATING	BUILD value for Retail and Marketing by deriving Marketing ROI metrics..

1. **Retailing in the Digital Era:** New Age Retailing, Digital Consumers Characteristics – interconnected , involved, interconnected, co-creation, collaboration, Customer Data – Big Data, Business Analytics, Customer Insights, Data Characteristics - Variety, Volume, Velocity, Veracity. Critical issues in Modern day Retail, The Digital organization, Retail analytics for decision making, Informed and Risk-Aware Decisions , Benefits of Retail Analytics – Informed Decisions, Risk mitigation, Gaining visibility , Retail Analytics for Strategic – Tactical and Operational decisions. **(3)**

2. **Marketing in a Consumer-Driven Era:** Understanding Consumer Buying Behavior and Trends , Leveraging customer data, Putting information in context, Clicking with consumer communities, Keeping content in mind, From personalization to commerce. **(3)**

3. **Key Questions:** What they are buying, Who they are, How they are buying, Where else they are buying? **(3)**

4. **Data sources:** Customer, Retailer, Supplier, Market, Web, Mobile, Social, Call Centres,. **(3)**

5. **Looking at Unstructured Data:** The unstructured data challenge, Recognizing the untapped analytics opportunity, Customer-Driven Decision Making, Content Analytics in Action, Understanding Affinities between Products and Customers, Advanced affinity analysis, Market basket analysis, Understanding customer preferences , Anticipating the customer's next move, Improving Retail Promotions. **(3)**

6. **Merchandising Analytics:** Assortment planning , GeoSpatial Analytics, Product placement, Space Optimisation, Product adjacency, Aligning store-level assortment with demand, Category Intelligence, Developing dynamic retail assortments, Prioritization of Product categories. **(3)**

7. **Marketing Analytics:** Marketing Mix ROI, Promotions – Promotional Maturity Curves, Pricing – Price per segment, Margin, Profitability, Personalisation, Campaigns, Marketing Return Curves, Scenario Analysis, Driving better P&L analyses, Managing Incentive Compensation. **(3)**

8. **Supply Chain Analytics:** Creating a Demand-Driven Supply Chain, Gaining Visibility across the Supply Chain, Resolving Operations Problems Premptively , Logistics, Inventory, Supplier performance, Demand forecasting, Vendor Intelligence, Vendor Rankings, Fulfillment Intelligence, Inventory Diagnostics, Shrinkage, Optimization opportunities. **(3)**

9. **Store operations analytics :** Using Analytics to Optimize Staffing Plans, Drilling into HR analytics, Customer Traffic, Store Performance Dashboards, Local Market Analytics, Online Offline Analytics, Sales Trends, Brand Performance, Account Performance Forecasts. **(3)**

10. **Customer View:** Customer Insights, Omni channel insights, Personalization, merchandise Data sources, including operations and supplier. **(3)**

Suggested Text Books:
1. Retail Analytics – The Secret Weapon, Emmett Cox
2. Behaviour Analytics in Retail, Ronny Max
3. The Little Book on Big Data: Understand Retail Analytics Through Use Cases and Optimize Your Business, Mahogany Beckford
4. The New Science of Retailing: How Analytics are Transforming the Supply Chain and Improving Performance, Fisher and Raman
5. The Strategy and Tactics of Pricing: A Guide to Growing More Profitably, Nagle, Hogan and Zale, Prentice-Hall
6. Competing on Analytics, Davenport, Harris
7. The New Rules of Retail: Competing in the World's Toughest Marketplace, Lewis and Dart
8. Sales Promotions, Neslin, Marketing Science Institute

Semester II		219BA: Workforce Analytics
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES

CO2019BA.1	REMEMBERING	ENUMERATE the use of Workforce Analytics.
CO2019BA.2	UNDERSTANDING	UNDERSTAND the process of creating and using HR analytics
CO2019BA.3	APPLYING	USE dashboards, pivot tables for data driven decision making in HR.
CO2019BA.4	ANALYSING	ILLUSTRATE the use of various tools and frameworks for predictive analytics.
CO2019BA.5	EVALUATING	DERIVE a variety of metrics and quantify key outcomes in multiple areas of HR.
CO2019BA.6	CREATING	BUILD value for HR departments by showing clear links between HR and Business outcomes.

1.   **Workforce Analytics – Overview:** Workforce Analytics: definition, evolution, function of Workforce analytics, Use of Workforce / People / HR metrics to measure results in HR - Process vs Outcome , Efficiency vs Effectiveness, Lead vs Lag, challenges in measuring human capital, HR Business Framework, Concept of Balanced Score Card, Identifying key workforce questions, Strategic Case for Workforce Analytics, Data Sources, Power of combining data sources, Good, Important & Key Metrics. **(3)**

2.   **Recruitment Metrics:** Fill-up ratio, Time to hire, Cost per hire, Early turnover, Termination during probation, Channel efficiency mix in terms of Direct hires, Employee referral hires, Agency hires & Lateral hires, Offer reject and renege, Fulfilment ratio, Quality of hire, Recruitment to HR cost. **(3)**

3.   **Diversity Metrics:** Workforce diversity index, Gender mix, Differently abled index, Implementation challenges. **(3)**

4.   **Talent Metrics:** Retention index, Voluntary and involuntary turnover, Turnover by department, grades, performance, and service tenure, Internal hired index. **(3)**

5.   **Learning & Development Metrics:** Training need identification, Make or Buy Model, Training effectiveness evaluation, Percentage of employee trained, Internally and externally trained, Training hours and cost per employee, ROI calculation. **(3)**

6.   **Internal Mobility Metrics:** Career Progression Indices - Promotion index, Rotation index, Career path index, Level wise succession readiness index. **(3)**

7.   **People Deployment Metrics:** Employees per manager, Employee service profiling, Workforce age profiling, Workforce service profiling, Churn index, Separation clearance time. **(3)**

8.   **HR Cost Metrics:** Revenue per employee, Operating cost per employee, PBT per employee, HR cost per employee, HR to operating cost, Compensation to HR cost, HR budget variance, HR ROI. **(3)**

9.   **HR KPI Dashboard:** Calculating HR KPI, Scorecard based on recruitment, training and development, Calculating HR KPI, Scorecard based on employee retention, and turnover. **(3)**

10.   **HR Predictive Analytics:** Regional and country level differences in turnover data, Predicting individual and team turnovers, Turnover costs for business implications, Selection decisions from previous performance data, Predictive modelling of individual and team performance, Identifying flight-risk candidates, Report generation. **(3)**

Suggested Text Books:
1.   The Practical Guide to HR Analytics: Using Data to Inform, Transform, and Empower HR Decisions, Shonna D. Waters, Valerie N. Streets, Lindsay Mcfarlane, Rachael Johnson-Murray
2.   HR Analytics: Understanding Theories and Applications , Dipak Kumar Bhattacharyya
3.   Doing HR Analytics - A Practitioner's Handbook With R Examples Lyndon Sundmark

Semester II		220BA: Tableau
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221BA.1	REMEMBERING	DEFINE Tableau terminology and SHOW how to Connect to your data, Edit and save a data source.
CO221BA.2	UNDERSTANDING	ILLUSTRATE the use of the Tableau interface to effectively create powerful visualizations and charts.
CO221BA.3	APPLYING	MAKE USE OF statistical techniques to analyze your data, parameters and input controls to give users control over certain values.

CO221BA.4	ANALYSING	INTEGRATE data sources using data blending and Combine data from multiple tables in the same data source using joins.
CO221BA.5	EVALUATING	CREATE basic calculations including basic arithmetic calculations, custom aggregations and ratios, date math, and quick table calculations.
CO221BA.6	CREATING	BUILD spatial visualizations of non-geographic data by using advanced geographic mapping techniques and custom images and geocoding.

1. **Data Connections:** Tableau terminology, Tableau interface/paradigm, Create and save data connections, Create a live connection to a data source, Explain the differences between using live connections versus extracts, Create an extract, Save metadata properties in a .TDS, Modify data connections, Add a join, Add a blend, Add a union, Manage data properties, Rename a data field, Assign an alias to a data value, Assign a geographic role to a data field, Change data type for a data field (number, date, string, boolean, etc.), Change default properties for a data field (number format, aggregation, color, date format, etc.) **(5+1)**

2. **Organizing & Simplifying Data:** Organize data and apply filters, Filter data, Sort data, Build groups, Build hierarchies, Build sets, Add a filter to the view, Add a context filter, Add a date filter, Apply analytics to a worksheet, Add a manual or a computed sort, Add a reference line or trend line, Use a table calculation. **(5+1)**

3. **Field & Chart Types :** discrete v. continuous, Measure Names and Measure Values, Generated Fields, Use bins and histograms, Heat maps, Tree maps, Bullet graphs, bar chart, line chart, stacked bar, Combined Axis Charts, Dual Axis Charts, Scatter Plots, Data Highlighter, Cross tabs, Motion charts, Bar in bar charts, Box plots, Gantt Bar Charts, Paretos, Sparklines, geocoding , spatial visualizations of non-geographic data, Using titles, captions and tooltips, Editing axes, Mark labels and annotations. **(5+1)**

4. **Calculations:** Manipulating string and date calculations, Create quick table calculations, Use LOD calculations; types of LOD calculations, Use Ad-hoc calculations, Work with aggregation options, Build logic statements, Build arithmetic calculations, Build grand totals and sub-totals, Use calculations in join clauses, Create a calculated field (e.g. string, date, simple arithmetic), Add a parameter. **(5+1)**

5. **Sharing Insights:** Format view for presentation, Use color, Use bolding, Use shapes, Change size of marks, Select fonts, Create and modify a dashboard, Create a dashboard layout, Add interactive or explanatory elements, Add dashboard actions, Modify existing dashboard layout for mobile devices, Create a story using dashboards or views, Share a twbx as a PDF, Share a twbx as an image. **(5+1)**

Suggested Text Books:
1. Mastering Tableau, David Baldwin
2. Communicating Data with Tableau: Designing, Developing, and Delivering Data Visualizations, Ben Jones
3. Learning Tableau, Joshua N. Milligan
4. Practical Tableau: 100 Tips, Tutorials, and Strategies from a Tableau Zen Master, Ryan Sleeper

Semester II		**221BA: Data Warehousing Project Life Cycle Management**
2 Credits	LTP: 0:3:1	**Subject Elective (SE) Course – Business Analytics**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO221BA.1	REMEMBERING	DESCRIBE various stages in Data Warehouse development process.
CO221BA.2	UNDERSTANDING	EXPLAIN the significance of and Project Management issues to be considered in the Data warehouse and Business Intelligence projects and the practicality of each phase.
CO221BA.3	APPLYING	MAKE USE OF the Data warehouse Lifecycle.
CO221BA.4	ANALYSING	FORMULATE Requirements Definition using requirements gathering methods.
CO221BA.5	EVALUATING	DETERMINE users of information and SELECT appropriate Information Delivery Tools, OLAP models and Data Mining Techniques.
CO221BA.6	CREATING	CREATE an Implementation Plan for a Data warehouse Project.

1. **Data Warehousing Project Life Cycle Management - Planning And Requirements**: Data to Information Lifecycle, Brief History of Accessing, Reporting And Analyzing Data, Business Intelligence (BI) defined, Data Warehousing (DW) defined, Data Mining defined, Data Stores and Data Marts defined, Uses of BI & DW, Business Drivers For BI, Business and IT Drivers For DW, Applications that use BI And DW, Data Shadow Systems, Industry terminology, Planning the Data Warehouse Project, The Project Team, Project Management Considerations, Defining the Business Requirements, Dimensional Analysis, Information Packages, Requirements Gathering Methods, Requirements Definition: Scope and Content, Requirements as the Driving Force for Data Warehousing, Data Design, The Architectural Plan, Data Storage Specifications, Information Delivery Strategy. **(5+1)**

2. **Data Warehousing   Project Life Cycle Management   - Architecture And Infrastructure**: The Architectural Components, Understanding Data Warehouse Architecture, Distinguishing Characteristics, Architectural Framework, Technical Architecture, Infrastructure as the Foundation for Data Warehousing, Infrastructure Supporting Architecture, Infrastructure Supporting Architecture, Database Software, Collection of Tools, The Significant Role of Metadata, Why Metadata is Important, Metadata Types by Functional Areas, Business Metadata, Technical Metadata, How to Provide Metadata. **(5+1)**

3. **Data Warehousing Project Life Cycle Management   - Data Design And Data Preparation**: Principles of Dimensional Modeling, From Requirements to Data Design, The STAR Schema, STAR Schema Keys, Advantages of the STAR Schema, Updates to the Dimension Tables, Miscellaneous Dimensions, The Snowflake, Schema, Aggregate Fact Tables, Families of STARS, Data Extraction, Transformation, and Loading, Data Extraction, Data Transformation, Data Loading, ETL Summary, Why is Data Quality Critical?, Data Quality Challenges, Data Quality Tools, Data Quality Initiative. **(5+1)**

4. **Data Warehousing Project Life Cycle Management   - Information Access And Delivery**: Matching Information to the Classes of Users. Information from the Data Warehouse, Users of the Information, Information Delivery, Information Delivery Tools, Demand for Online Analytical Processing, Major Features and Functions, OLAP Models, OLAP Implementation Considerations, Data Warehousing and the Web, Web-Enabled Data Warehouse, Web-Based Information Delivery, OLAP and the Web, Building a Web-Enabled Data Warehouse, Data Mining, Major Data Mining Techniques, Data Mining Applications. **(5+1)**

5. **Data Warehousing Project Life Cycle Management - Testing , Implementation And Maintenance**: Unit, IT, ST, Data volume, ETL and other test techniques, The Physical Design Process, Physical Design Steps, Physical Design, Considerations, Physical Storage, Indexing the Data Warehouse, Performance Enhancement Techniques, Data Warehouse Deployment, Major Deployment Activities, Considerations for a Pilot, Security, Backup and Recovery, Growth and Maintenance, Monitoring the Data Warehouse, User Training and Support, Managing the Data Warehouse, Scoping, Estimation, proposal writing and Risk planning. **(5+1)**

Suggested Text Books:
1. The Data Warehouse Lifecycle Toolkit, Ralph Kimball
2. Data Warehouse Project Management , Sid Adelman, Larissa T. Moss
3. The Data Warehouse Lab: A step-by-step guide using SSIS and SSAS, Amin Jalali
4. Data Warehouse for Project Managers, Laura Reeves
5. The Profit Impact of Business Intelligence, Steve Williams , Nancy Williams

Semester III and IV Syllabus

Generic Core (GC) Courses - Semester III

Semester III		301– Strategic Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO301.1	REMEMBERING	DESCRIBE the basic terms and concepts in Strategic Management.
CO301.2	UNDERSTANDING	EXPLAIN the various facets of Strategic Management in a real world context.
CO301.3	UNDERSTANDING	DESCRIBE the trade-offs within and across strategy formulation, implementation, appraisal.
CO301.4	APPLYING	INTEGRATE the aspects of various functional areas of management to develop a strategic perspective.
CO301.5	ANALYSING	EXPLAIN the nature of the problems and challenges confronted by the top management team and the approaches required to function effectively as strategists.
CO301.6	CREATING	DEVELOP the capability to view the firm in its totality in the context of its environment.

1. **Understanding Strategy:** Concept of strategy, Levels of Strategy - Corporate, Business and Functional. Strategic Management - Meaning and Characteristics. Distinction between strategy and tactics, Strategic Management Process, Stakeholders in business, Roles of stakeholder in strategic management. Strategic Intent – Meaning, Hierarchy, Attributes, Concept of Vision & Mission - Process of envisioning, Difference between vision & mission. Characteristics of good mission statements. Business definition using Abell's three dimensions. Objectives and goals, Linking objectives to mission & vision. Critical success factors (CSF), Key Performance Indicators (KPI), Key Result Areas (KRA). Components of a strategic plan, Analyzing Company's External Environment: Environmental appraisal, Scenario planning – Preparing an Environmental Threat and Opportunity Profile (ETOP). Analyzing Industry Environment: Industry Analysis - Porter's Five Forces Model of competition, Entry & Exit Barriers. (7+2)

2. **Analyzing Company's Internal Environment:** Resource based view of a firm. Analyzing Company's Resources and Competitive Position - meaning, types & sources of competitive advantage, competitive parity & competitive disadvantage. VRIO Framework, Core Competence, characteristics of core competencies, Distinctive competitiveness. Benchmarking as a method of comparative analysis. Value Chain Analysis Using Porter's Model: primary & secondary activities. Organizational Capability Profile: Strategic Advantage Profile, Concepts of stretch, leverage & fit, ways of resource leveraging – concentrating, accumulating, complementing, conserving, recovering. Portfolio Analysis: Business Portfolio Analysis – BCG Matrix – GE 9 Cell Model. (7+2)

3. **Generic Competitive Strategies:** Meaning of generic competitive strategies, Low cost, Differentiation, Focus – when to use which strategy. Grand Strategies: Stability, Growth (Diversification Strategies, Vertical Integration Strategies, Mergers, Acquisition & Takeover Strategies, Strategic Alliances & Collaborative Partnerships), Retrenchment – Turnaround, Divestment, Liquidation, Outsourcing Strategies. (7+2)

4. **Strategy Implementation:** Barriers to implementation of strategy, Mintzberg's 5 Ps – Deliberate & Emergent Strategies. Mc Kinsey's 7s Framework. Organization Structures for Strategy Implementation: entrepreneurial, functional, divisional, SBU, Matrix, Network structures, Cellular/ Modular organization, matching structure to strategy, organizational design for stable Vs. turbulent environment, Business Continuity Planning. Changing Structures & Processes: Reengineering & strategy implementation – Principles of Reengineering. Corporate Culture: Building Learning organizations, promoting participation through technique of Management by Objectives (MBO). Strategy Evaluation: Operations Control and Strategic Control - Symptoms of malfunctioning of strategy – Concept of Balanced scorecard for strategy evaluation. (7+2)

5. **Blue Ocean Strategy:** Difference between blue & red ocean strategies, principles of blue ocean strategy, Strategy Canvass & Value Curves, Four Action framework. Business Models: Meaning & components of business models,

new business models for Internet Economy– E-Commerce Business Models and Strategies – Internet Strategies for Traditional Business –Virtual Value Chain. Sustainability & Strategic Management: Start ups- growth and reasons for decline. Threats to sustainability, Integrating Social & environmental sustainability issues in strategic management, meaning of triple bottom line, people-planet-profits. (7+2)

Suggested Text Books:
1. Strategic Management and Business Policy by Azhar Kazmi, Tata McGraw-Hill
2. Strategic Management by Ireland, Hoskisson & Hitt, Indian Edition, Cengage Learning
3. Crafting and Executing Strategy- The Quest for Competitive Advantage by Thompson, Strickland, Gamble & Jain, Tata McGraw-Hill
4. Concepts in Strategic Management & Business Policy by Thomas L. Wheelen & J. David Hunger, Pearson

Suggested Reference Books:
1. Strategic Management by Dr. Yogeshwari L. Giri
2. Competitive Strategy: Techniques for Analyzing Industries and Competitors by Michael E. Porter, First Free Press Edition
3. Competing for the Future by Gary Hamel & C.K. Prahlad, .
4. Blue Ocean Strategy by Kim & Mauborgne

Semester III		302– Decision Science
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO302.1	REMEMBERING	DESCRIBE the concepts and models associated with Decision Science.
CO302.2	UNDERSTANDING	UNDERSTAND the different decision-making tools required to achieve optimisation in business processes.
CO302.3	UNDERSTANDING	APPLY appropriate decision-making approach and tools to be used in business environment.
CO302.4	APPLYING	ANALYSE real life situation with constraints and examine the problems using different decision-making tools
CO302.5	ANALYSING	EVALUATE the various facets of a business problem and develop problem solving ability
CO302.6	CREATING	DISCUSS & propose the various applications of decision tools in the present business scenario.

1. **Introduction:** Importance of Decision Sciences & role of quantitative techniques in decision making. **Assignment Models:** Concept, Flood's Technique/ Hungarian method, applications including restricted, multiple assignments and maximization objective. **Transportation Models:** Concept, formulation, problem types: balanced, unbalanced, restriction and maximization, Basic initial solution using North West Corner, Least Cost & VAM, Optimal solution using MODI, multiple solution case to be considered. (8+2)
2. **Linear Programming:** Concept, Formulation & Graphical Solution. Markov Chains: Applications related to management functional areas, estimation of transition probabilities. Simulation Techniques: Monte Carlo Simulation, scope, and limitations. (7+2)
3. **Probability:** Concept, Conditional Probability theorem-based decision making. Probability Distributions: Normal, Binomial, Poisson (Simple numerical for decision making expected). **Queuing Theory:** Concept, Single Server (M/M/I, Infinite, FIFO), Introduction of Multi Server (M/M/C, Infinite, FIFO) (Numerical on single server model expected) (8+2)
4. **CPM & PERT:** Concept, Drawing network, identifying critical path, Network calculations- calculating EST, LST, EFT, LFT, Slack, floats & probability of project completion in case of PERT. Network crashing: Concept of project cost and its components, time and cost relationship, crashing of CPM network. (8+2)
5. **Decision Theory:** Concept, Decision making under uncertainty Maximax, Maximin, Minimax regret, Hurwicz's & Laplace criterion, Decision making under risk (EMV, EVPI) for items with and without salvage value. Game

Theory: Concept, 2 × 2 zero sum game, Pure & Mixed Strategy, solution of games with dominance, average dominance method. Sequencing problem: Introduction, Problems involving n jobs-2 machines, n jobs- 3 machines & n jobs-m machines, Comparison of priority sequencing rules.(6+2)

Important Note:
1. In each unit caselet related to management situation in various functional domains shall be discussed by the subject teacher.
2. Numerical based on functional areas of business are expected on each unit

Suggested Text Books:
1. Quantitative Techniques in Management by N.D. Vohra Tata, McGraw Hill Publications (latest Edition)
2. Operations Research by Hamdy A. Taha, Pearson Publication (latest edition)
3. Operations research by Hira Gupta, S. Chand Publication (latest Edition)
4. Operations Research Theory & Applications by J K Sharma- MacMillan Publishers India Ltd. (latest Edition)
5. Statistical Methods by S.C. Gupta S. Chand Publication (latest edition)
6. Comprehensive Statistical Methods by P.N. Arora, Sumeet Arora, S. Arora S. Chand Publication

Suggested Reference Books:
1. Quantitative techniques & statistics By K L Sehgal Himalaya Publications (latest edition)
2. An introduction to management science: Quantititave approcach for decision making- Cengage Learning- Anderson (latest edition)
3. Introduction to Operations Research by Billey E. Gilett,TMGH (latest edition)
4. Operations Research by Nita Shah, Ravi Gor, Hardik Soni, PHI (latest Edition).
5. Operations Research by R. Pannerselvam, Prentice Hall India

Generic Core (GC) Courses - Semester IV		

Semester IV		401 – Enterprise Performance Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO401.1	REMEMBERING	Enumerate the different parameters & facets of management control of an enterprise.
CO401.2	UNDERSTANDING	Illustrate the various techniques of enterprise performance management for varied sectors.
CO401.3	UNDERSTANDING	Determine the applicability of various tools and metrics as a performance evaluation & management tools.
CO401.4	APPLYING	Analyse the key financial & non-financial attributes to evaluate enterprise performance.
CO401.5	ANALYSING	Formulate the various parameters to evaluate enterprise performance effectively through implementation of strategy.

1. **Performance Management:** Concept, Need, Linkages with Strategic Planning, Management Control and Operational Control. **Performance Evaluation Parameters:** Financial – Responsibility Accounting –Concept of Responsibility Centers, Revenue Centre, Expense Centre - Engineered and Discretionary costs – Committed costs, Profit Centre, Investment Centers. ROI, ROA, MVA, EVA – DuPont analysis. (Numerical Not expected – Interpretation only) Limitations of Financial Measures**. (8+1)**

2. **Performance Evaluation Parameters:** Non-Financial Performance measures – Balanced Scorecard, Malcolm Baldrige Framework. **Measuring SBU Level Performance:** Concept, Need, and Linkages with Enterprise Performance Management – Goal Congruence. Transfer Pricing – Objective, Concept, and Methods – Cost based, Market price based & Negotiated, Applicability of Transfer Pricing. (Numerical / Case is expected) (7+1)

3. **Capital Expenditure Control**: Concept, Need, Process of Capital Budgeting, Types of capital expenditure decisions – pre-sanction, operational and post-sanction control of capital expenditure. Tools & Techniques of Capital Expenditure Control: Performance Index, Technical Performance Measurement, Post completion audit. **Performance Evaluation Parameters for Projects**: Project Control Process: Setting base line plan, Measuring progress and performance, comparing plan against action, Taking action, Schedule variance (time overruns), Project Cost Variance (cost overruns). (8+2)

4. **Performance Evaluation Parameters for Banks:** Customer Base, NPAs, Deposits, ROI, Financial Inclusion, Spread, Credit Appraisal, Investments. **Performance Evaluation Parameters for Retail:** ABC analysis, Sell Through Analysis, Multiple Attribute Method, Gross Margin Return on Investment (GMROI), GMROI as Gross Margin/Average Inventory at Cost, **Performance Evaluation Parameters for Non-Profit:** Features of Non-profit organizations, fund accounting, governance, product pricing, strategic planning & budget preparations, social audit. (8+2)

5. **Performance Evaluation Parameters for E-Commerce:** Features of E commerce, Need of evaluation, Metrics for performance evaluation: Business metrics, Traffic metrics, Conversion matrix & Audience involvement metrics. Various KPI used by E Commerce industry : Website traffic , referral traffic, conversion rate optimization, bounce rate of website, repeat visit, cart abandon rate, cost per conversion, average order value, revenue on advertising spend, customer life time value, net promoter score, churn rate. **Audit Function as a Performance Measurement Tool:** Financial Audit, Internal Audit, Cost Audit, Management Audit – Principles and Objectives (Audit Reports / Formats are expected to be discussed in the class from a performance measurement perspective). (9+1)

Suggested Text Books:
1. Management Control System by Robert Anthony & Vijay Govindrajan, Tata McGraw Hill Publishing Co. Ltd.
2. Management Control in Non Profit Organizations by Robert Anthony & David Young, McGraw Hill International Publication
3. Retailing Management by Swapna Pradhan, TMGH

Suggested Reference Books:

1. Project Management by K.Nagarajan, New Age International Publications
2. Principles and Practices of Auditing by Ravindar Kumar & Virendar Sharma, PHI.
3. Principles and Practices of Banking by Indian Institute of Banking & Finance, MacMillan India Ltd.
4. Financial Management by Prasanna Chandra, TMGH
5. E business: A Canadian perspective for a Networked World , Gerald Trites, J. Efrim Boritz Pearson

Semester IV		402 – Indian Ethos & Business Ethics
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO402.1	REMEMBERING	DESCRIBE major theories, concepts, terms, models and framework of Indian ethos and business ethics. DISCOVER the contemporary Issues in Business Ethics
CO402.2	UNDERSTANDING	CLASSIFY and RECOGNIZE Karma, Karma Yoga and discover its relevance in business setting, ILLUSTRATE the business ethical decision rationale derived from Indian Heritage Scriptures.
CO402.3	UNDERSTANDING	APPLY Principles, Theories, Models and Framework of Indian ethos and business ethics in order to incorporate value system in work culture and work place.
CO402.4	APPLYING	DEVELOP and EXHIBIT analytical, problem solving skills, and work ethos by COMPREHENSION and PRACTICE of Indian ethos and value system
CO402.5	ANALYSING	IMPLEMENT, EVALUATE, and FACILITATE ethical business behavior and promote sustainable business ecology, improve profitability, foster business relation and employee productivity.
CO402.6	CREATING	ELABORATE Ethical dilemmas in different business areas of marketing, HRM and Finance and ADAPT dilemma resolution interventions by referring to certain norms, theories and models of Eastern Management.

1. **Indian Ethos and Values : Its relevance at Workplace: Indian Ethos-** Meaning, Features, Need, Evolution, Relevance, Principles Practiced by Indian Companies, Requisites, Elements, Role of Indian Ethos in Managerial Practices, Triguna Theory-OSHA Model. Work Ethos meaning, dimensions of Work Ethos. **Values -** Concepts, Values in business, Value system in work culture, and Values of Indian Managers, Relevance of Value Based Management in Global Change; Impact of values on Stakeholders; Trans-Cultural Human Values, Ethics v/s Ethos, Eastern Management v/s Western Management. (8+1)

2. **Indian Model of Management:** Concept of Indian Model of Management in the Indian socio-political environment, Laws of Karma and its relevance in business settings, Indian Heritage in Business-Management. Production and Consumption: Management lessons from Indian heritage scriptures (like Mahabharata & Ramayana), Leadership Pointers from Kautilya's Arthashastra, VEDA Model of Leadership, Corporate Rishi Model, Theory K, WE theory (West-East Theory) (8+1)

3. **Business Ethics as Applied ethics:** Meaning, Characteristics of Business Ethics, Importance of Business Ethics (Long Term growth, Cost reduction, Risk mitigation, Limited resources, etc.) Types of Business Ethics (Transactional Ethics, Participatory Ethics, Recognition Ethics), Factors influencing business ethics. Categories of Ethics (Personal, Professional, Managerial) Business Code of Conduct), Approaches to Business Ethics: Consequentialist & Non- Consequentialist Theories of Ethics - Deontological Theory & Teleological Theory, Kohlberg Six stage moral development. (8+1)

4. **Ethical decision making in business matrix:** Framework of Ethical decision making, Ethical dilemmas in different functional areas of Business (Finance, Marketing HRM and International Business), Intellectual Property Rights and Business Ethics, Ethical challenges for Managers, Ethical Decision Making process, it's Model -STEP Model, PLUS Filter Model. (8+1)

5. **Applications of Ethical Principles to Contemporary, Moral and Ethical problems / issues related to Business:** Contemporary cases on Corporate Strategy and Climate Change, Corporate Strategy and Natural resource depletion, Corporate Social Responsibility, transparency and accountability, Social Media and E-Platforms. Current ethical issues like Bank scams, Airlines etc. (8+1)

Suggested Text Books:
1. Business Ethics (Concept, Application, Framework and Cultural Impact) k. Aswathappa, J. Ushar Rani, Sunanda Gundavajhala, Himalaya Publishing House
2. Ethics in Management and Indian Ethos, Biswanath Ghosh , Vikas Publishing House
3. Indian Ethos of Management, Tushar Agarawal and Nidhi Chandorkar, Himalaya Publication House.
4. Indian Ethos and Values for Managers, Khandelwal , Himalaya Publishing House

Suggested Reference Books:
1. Indian Ethos & Values In Management, Nandagopal R, Ajith Sankar, Tata McGraw Hill Publishing Co. Ltd.
2. New Mantras in Corporate corridors From Ancient Routes to Global Roots, Subhas Sharma, New Age International Publishers
3. Business Ethics: Concepts and Cases, Velasquez, Pearson Education India.
4. Corporate Chanakya , Radhakrishnan Pillai , Jaico Publishing House

Generic Courses (Electives) – University Level – Semester III & IV		

Semester III		306 – International Business Economics
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 306 .1	Remembering	RECALL and ENUMERATE the economic aspects of international business.
CO 306 .2	Understanding	DESCRIBE the outcomes of globalising and liberalising trade environment, trade policy frameworks and macroeconomic linkages of the open economy.
CO 306 .3	Applying	DISCUSS the mechanisms and working of the foreign exchange markets.
CO 306 .4	Analysing	EXAMINE how a protectionist trade policy improves or diminishes the prospects of survival / growth of business.
CO 306 .5	Evaluating	APPRAISE the implications of trade related policies under different levels of product market concentration?

1. **International Trade:** Trade Theories , Ricardo and Comparative advantage, Heckscher Ohlin model of factor abundance , Krugman's model of Intra-Industry Trade (5+1)
2. **Trade policies:** Unilateral and multilateral trade policies, Tariffs in competitive markets, WTO tariff policy, Quota, Tariff and quota in monopolistic markets, Dumping and Antidumping Duty under the WTO, Subsidies and Countervailing duties under the WTO, Export taxes, Export subsidies, Economic Integration - Custom Unions and Free Trade Areas - Major Regional Trade Agreements(5+1)
3. **Currency and International Finance:** Currency market and exchange rate, Spot and forward markets, Types of Foreign Exchange Transactions – Reading Foreign Exchange Quotations – Forward and Futures Market – Foreign-Currency Options – Arbitrage – Speculation and Exchange-Market Stability, Currency market and basic Central Bank operation, Product market approach to determination of exchange rate, Asset market approach to determination of exchange rate. (5+1)
4. **Exchange rate policies and macroeconomic management:** Fixed and flexible rates – Central Banks actions, Impact of changing exchange rates on exports and imports, Volatility managements by the government and Exchange rate regimes, Open economy macroeconomics, Monetary approach and asset market approach to predict future exchange rate, 3 International Financial Crises models - Understanding the recent few crises, The Euro Crisis/ crisis in Venezuela, Economic risk indicators for FDI and FII (5+1)
5. **International Banking:** Reserves, Debt and Risk : Nature of International Reserves – Demand for International Reserves – Supply of International Reserves – Gold Exchange Standard – Special Drawing Rights – International Lending Risk – The Problem of International Debt – Financial Crisis and the International Monetary Fund – Eurocurrency Market. (5+1)

Suggested Text Books:
1. International Economics Theory and Policy by Paul Krugman, Maurice Obstfeld, Pearson Education
2. International Economics by Robert Carbaugh, Thomson – South Western
3. International Business by John Daniels, Lee Radebaugh, Daniel Sullivan and Prashant Salwan, Pearson

Suggested Reference Books:
1. International Economics by Thomas Pugel, McGraw-Hill-Irwin
2. The World is Flat by Friedman Thomas
3. International Economics by Edward Leamer, editor,
4. Jagdish N. Bhagwati, Arvind Panagariya, and T. N. Srinivasan, Lectures on International Trade
5. Rethinking International Trade by Paul R. Krugman

Semester III		307– International Business Environment
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 307 .1	Remembering	Recall and Describe the key concepts of international Business Environment
CO 307 .2	Understanding	Understand the relevance of Multinational Corporations (MNCs) in global trade
CO 307 .3	Applying	Demonstrate the significance of FDI and FPI in respect of developing economy
CO 307 .4	Analysing	Analyze the issues related to Labor, Environmental and Global Value chain
CO 307 .5	Evaluating	Formulate and discuss the case related to various Agreements under WTO and contemporary global business environment.

1. **Introduction to International Business:** Importance, nature and scope of International business; modes of entry into International Business, internationalization process. Globalization: Meaning, Implications, Globalization as a driver of International Business. The Multinational Corporations (MNCs) – evolution, features and dynamics of the Global Enterprises. Consequences of Economic Globalization, Brexit, Reverse globalization. (5+1)

2. **International Business Environment:** Political Economy of International Business, Economic and Political Systems, Legal Environment, Cultural Environment, Ethics and CSR in International Business. (5+1)

3. **International Financial Environment:** Foreign Investments - Pattern, Structure and effects. Theories of Foreign Direct Investment, Traditional and Modern theories of FDI, Modes of FDI - Greenfield, Brownfield Investments, Mergers and Acquisitions, Motives of FDI, FDI contrasted with FPI. Basics of Forex Market. (5+1)

4. **International Economic Institutions and Agreements:** WTO, IMF, World Bank, UNCTAD Tariff and Non-tariff Barriers. Balance of Payment Account: Concept and significance of balance of payments, Current and capital account components. Introduction to Basic Concept of IFRS. (5+1)

5. **Emerging Issues in International Business Environment:** Growing concern for ecology, Digitalisation; Outsourcing and Global Value chains. Labor and other Environmental Issues, Impact of Pandemic COVID-19 on international trade. (5+1)

Suggested Text Books:
1. Global Business Management by Adhikary, Manab, Macmillan Publishers, New Delhi.
2. International Business Environment by Black and Sundaram, Prentice Hall of India, New Delhi
3. Economic Environment Of Business by Gosh, Biswanath, South Asia Book, New Delhi.
4. International Business by Aswathappa Tata Mc Graw Hill publications, New Delhi.
5. International Business by P. Subha Rao

Suggested Reference Books:
1. Going International Response Strategies For Indian Sector by Bhattacharya.B, Wheeler Publishing Co, New Delhi.
2. International Economies by D.N. Krithani.
3. International Business by Roger Bennett
4. Business Environment by C.B. Gupta
5. International Business by Francis Cherunillam

Semester III		308 – Project Management
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 308 .1	Remembering	DEFINE the key terms and concepts in project management.
CO 308 .2	Understanding	EXPLAIN the Importance of project management methodologies and tools at the distinct stages in the Project's life cycle

CO 308 .3	Applying	ILLUSTRATE the importance of PM in most industries and businesses
CO 308 .4	Analysing	EXAMINE the importance of Leadership specifically in heterogenous and virtual teams as well as governance and approaches to conflict resolutions
CO 308 .5	Evaluating	DESIGN dashboard, status report and index for Key Performance Indicators of project for the Management

1.   **Overview of Project Management:** Concept of Project, Attributes of a Project, Importance of Project Management, Project Management Process, Project Lifecycle, Project Stakeholders, Project Management Structures, Choosing Appropriate Project Management Structure, Implications of Organizational Culture, Main Causes of Project Failure. Project Definition: Defining Scope, Establishing Priorities, Creating the Work Breakdown Structure (WBS), integrating the WBS with the organization, Coding the WBS for information system, Project Roll Up, Process Breakdown Structure, Responsibility Matrices. (5+1)

2.   **Project Planning:** Estimating Project Times and Costs: Factors Influencing Quality of Estimates, Estimation Guidelines for Time, Costs and resources, Macro versus Micro Estimating, Methods for Estimating Project Times and Costs, Level of detail, Developing Budgets, Types of Costs, Refining estimates and contingency funds. Developing a Project Plan: Developing the Project Network, From Work Package to Network, Constructing a Project Network, Activity-on-Node Fundamentals, Network Computation process, Using the Forward and Backward pass information, Level of Detail for activities, Extended Network techniques. (5+1)

3.   **Project Scheduling & Risk Management:** Scheduling Resources and Reducing Project Duration: Types of Project Constraints, Classification of Scheduling Problem, Resource Allocation Methods, Splitting, Multitasking, Benefits of scheduling resources, Assigning Project work, Multi Project resource Schedules, Rationale for reducing project duration, Options for accelerating Project Completion, Concept and construction of a Project Cost – Duration Graph, Practical considerations . Managing Risk: Risk Management process – Risk Identification, Risk Assessment, Risk Response Development, Contingency Planning, Risk Response Control, Change Control Management. (5+1)

4.   **Project Organization:** The Project Manager: Role and Responsibilities of the project Manager, Planning, Organizing, Controlling, Skills of the Project Manager – Leadership Abilities, Coaching & mentoring Abilities, Communication Skills, Interpersonal Skills, Ability to Handle Stress, Problem Solving Skills, Time Management Skills, Delegation, Management of Change. Managing Project Teams: The five stage team development model, Situational factors affecting team development, Team effectiveness, Conflict in projects, Sources of Conflict, Handling Conflict. Managing Virtual Project teams, Project team pitfalls. (5+1)

5.   **Project Evaluation:** Progress and Performance Management and Evaluation: Structure of a Project Monitoring Information System, Project Control Process, Monitoring Time Performance, Need for an Integrated Information System, Developing a dashboard, status report and index to monitor progress, Forecasting final project cost, Other control issues. Project Audit and Closure: Project Audit, Project Audit Process, Project Closure, Team, Team member and Project Manager Evaluations. (5+1)

Suggested Text Books:
1.   Clifford Gray, Erik Larson and Gautam Desai, Project Management, The Managerial Process, Tata McGraw Hill
2.   Effective Project Management, Clements and Gido, Thomson – India Edition.
3.   Samuel Mantel, Jack Meredith, Scott Shafer, Margret Sutton and M.R.Gopalan, Project Management, Wiley India
4.   Prasanna Chandra, Projects, Planning, Analysis, Selection, Financing, Implementation and Review, Tata McGraw Hill

Suggested Reference Books:
1.   Project management Institute, The Guide to the Project Management Body of Knowledge (PMBOK Guide), PMI Publication

Semester III		309 – Knowledge Management
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 309 .1	Remembering	DEFINE the key terms and concepts in Knowledge Management.

CO 309 .2	Understanding	DESCRIBE the Knowledge Management cycle
CO 309 .3	Applying	DISCUSS the types of Knowledge and its implications.
CO 309 .4	Analysing	OUTLINE the importance of capturing knowledge elements and its structures application as a competitive advantage to business
CO 309 .5	Evaluating	EXPLAIN the human and business aspects of knowledge management.

1.   **Introduction to Knowledge:** Meaning of data, information, knowledge and expertise, Meaning of epistemology, Types of Knowledge - Subjective & Objective views of knowledge, procedural Vs. declarative, tacit Vs. explicit, general Vs. specific, Types of expertise – associational, motor skill, theoretical, Characteristics of knowledge – explicitness, codifiability, teachability, Specificity, Reservoirs of knowledge. (5+1)

2.   **KM and KM Cycle:** Why KM, KM system life cycle, and aligning KM and business strategy, KM Cycle: Knowledge creation, capturing tacit knowledge, Types of knowledge and its implications for KM Knowledge codification and system development: codification, system testing and deployment, Knowledge transfer and knowledge sharing- the role of culture and structure (5+1)

3.   **KM system :** Analysis design and development: Knowledge infrastructure, Knowledge audit, and knowledge team, Analysis, design and development of KM system, KM tools and Portals: inferences from data, data mining and knowledge portals (5+1)

4.   **KM Infrastructure:** Organizational Structure, Organizational Culture, Communities of Practice, Information Technology Infrastructure, Common Knowledge (5+1)

5.   **Evaluation of KM effectiveness:** KM Impact: Dimensions of KM Impact – People, Processes, Products & Organizational Performance, Factors influencing impact – universalistic & contingency views, Assessment of KM Impact – Qualitative & quantitative measures, Identification of appropriate KM solutions, Ethical, legal and managerial issues, KM experiences form Indian companies, KM innovation and Learning organization, The future of KM. (5+1)

Suggested Text Books:
1.   Fernandez I. B. and Sabherwal, R. (2010). Knowledge Management: System and Resources. PHI Delhi.
2.   Tiwana Amrit (1999).The Knowledge Management Toolkit. Prentice Hall PTR.
3.   Irma Becerra-Fernandez, Avelino Gonzalez, Rajiv Sabherwal (2004). Knowledge Management Challenges, Solutions, and Technologies, Prentice Hall. ISBN: 0-13-109931-0.
4.   Elias M. Awad, Hassan M. Ghaziri (2004). Knowledge Management. Prentice Hall. ISBN: 0-13-034820-1.

Suggested Reference Books:
1.   Donald Hislop, Knowledge Management in Organizations, Oxford 2nd Edition.
2.   Ian Watson (2002). Applying Knowledge Management: Techniques for Building Corporate Memories. Morgan Kaufmann. ISBN: 1558607609.
3.   Madanmohan Rao (2004). Knowledge Management Tools and Techniques:Practitioners and Experts Evaluate KM Solutions. Butterworth-Heinemann.ISBN: 0750678186.
4.   Stuart Barnes (Ed.) (2002). Knowledge Management Systems Theory and Practice. Thomson Learning.
5.   Kimiz Dalkir, Knowledge Management in Theory and Practice, Elsevier,Butterworth-Hinemann.
6.   Shelda Debowski, Knowledge Management, Wiley India Edition.

Semester III		310– Corporate Governance
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO310.1	REMEMBERING	RECOGNIZE and REMEMBER the scope of Corporate Governance.
CO310.2	UNDERSTANDING	UNDERSTAND the role of Board of Directors and Committees in Good Corporate Governance and key mechanism.
CO310.3	APPLYING	APPLICATION of empirical methods of Corporate Governance and its impact on the Firms.
CO310.4	ANALYSING	Analyze the legal framework of Corporate Governance and formulate Internal control policies.

| CO310.5 | EVALUATING | Evaluate the legal framework and global perspective of Corporate Governance. |
| CO310.6 | CREATING | FORMULATE and DISCUSS Cases related to CG (Models), their SUCCESS & FAILURES. |

1. **Conceptual Framework of Corporate Governance:** Introduction, Need and Scope Evolution of Corporate Governance, Developments in India. Corporate Governance Code and Agency Theory. Elements of Good Corporate Governance, Recent Corporate Governance Committee reports like N. R. Narayan Murthy Committee, J. J. Irani Committee etc. (5+1)

2. **Board Effectiveness & Various Board Committees:** Issues and Challenges : Board Composition; Diversity in Board Room; Types of Directors; Board's Role and Responsibilities, Chairman, CEO, Separation of Roles, Relationship between Directors and Executives, Visionary Leadership, Board Charter, Meetings and Processes, Directors' Training and Development. Performance Evaluation of Board and Directors Board Committees Various. Board Committees, their Composition, Role and Responsibilities, Contribution to Board Governance. (5+1)

3. **Corporate Governance and Other Stakeholders:** Shareholders: Rights of Shareholders, Challenges in Exercising Shareholders Rights Ownership structure & firm Performance, Legal Protection of small shareholders, Corporate Governance issues with regard to Related Party Transactions, Role of Investor Associations in Securing Shareholders Rights, Role of Institutional Investors in Corporate. Governance. Corporate Governance and Other Stakeholders: Employees, Customers, Lenders, Vendors, Government, Society. (5+1)

4. **Legislative Framework of Corporate Governance in India:** Under Listing Agreement, SEBI Guidelines, Companies Act, Corporate Governance in PSUs, Banks, Insurance Companies, Service Sector, IT Sector. Risk Management and Internal Control: Risk Management and Oversight, Enterprise Risk Management, Roles and Functions of Internal Control, Disclosure about Risk, Risk Management and Internal Control. Global Perspective of Corporate Governance: An International Perspective Australia, Singapore, South Africa, United Kingdom, Contemporary Developments in the Global Arena. (5+1)

5. **Recent Cases on Corporate Governance in India:** Corporate governance failure at Ricoh India: rebuilding lost trust, ICICI Bank- case of Chanda Kochhar, Corporate Governance at Infosys – A benchmark for Corporate Governance, Corporate Governance in India: Case Study of Satyam, Tata Group & Cyrus Mistry dispute, PNB, Kingfisher Airlines, Fortis etc. (5+1)

Suggested Text Books:
1. S. M. Dewan, Corporate governance in public sector enterprises, Pearson Longman, 2006.
2. Corporate Governance in India – An Evaluation by S C Das, PHI – Eastern Economy Edition.
3. Corporate Governance by Christine A Mallin, Oxford University Press
4. Corporate Governance – Global Concepts & Practices, Dr. S Singh, Excel Books.

Suggested Reference Books:
1. Corporate Governance, Principles, policies and Practices – A.C. Fernando, Pearson Education.
2. Corporate Governance – IICA, Taxmann.
3. The Art of Corporate Governance – Dr. Joffy George.
4. The Essential Book of Corporate Governance by G. N. Bajpai.
5. Companies Act 2013 and Rules.
6. SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015
7. Case Studies on Ethics and Corporate Governance Vol I and II, ICFAI Books.

Semester III		311–Management of Non-profit organizations
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO311.1	REMEMBERING	DESCRIBE the basic concepts and frameworks in the field of Non-Profit Sector & Non-Profit Organization.
CO311.2	UNDERSTANDING	EXPLAIN the characteristics of Non-Profit organizations, summarizing the factors affecting development of Non-Profit organization.

CO311.3	APPLYING	MAKE use of theoretical concepts, frameworks while registration process of Non-Profit Organization.
CO311.4	ANALYSING	EXAMINE the role of any public policies which helps NPO in decision making.
CO311.5	EVALUATING	EVALUATE the performance of Non- Profit organizations, the critical financial considerations of the Non - Profit organization.

1.   **Fundamentals of Non-profit organization:** Introduction of Non- Profit Sector & Non- Profit Organizations, Define the Non- Profit Organization and describe its dimensions. Key concepts in Non-Profit management including board of governance, staffing, regulation, and volunteer management. Concept of Non-Profit leadership and governance and the functions of boards in organizational governance, the Board's Role and Responsibilities. Roles of board members in Non-Profit organizations, responsibilities of Non-Profit Organizations. Elements of board behaviour for effectiveness of organization. Developing Leadership and Improving Governance in Non-Profit Organizations, Improving the Effectiveness of Boards of Directors and the tools used to facilitate assessments of board performance. (5+1)

2.   **Basics of Non-Profit Organization:** Difference between For-Profit and Non-Profit organizations, Characteristics of Non-profit Organizations. Factors affecting development of Non-Profit organizations, Challenges of managing a Non-Profit organizations, Factors responsible for success of Non-Profit organizations, Skills and abilities of the leaders of Non-profit organizations, vision, mission, values and goals of Non-Profit organizations. (5+1)

3.   **Registration and Formation of Non-Profit Organization:** Nature, objectives, legal procedures, formalities and documentations required for registration. Different types of Non-Profit Organizations: NGOs, Trust and Society, its significance, differences and relationships. Overview of Societies Registration Act, Indian Trust Act, Indian Companies Act, Charitable Endowment Act, Memorandum of Association, Rules and Bye-laws of Non-Profit Organizations, Tax Benefits and Exemptions under different acts. (5+1)

4.   **Managing Non-Profit Organizations:** Role of executives in building effective and sustainable organizations, Standards and code of conduct appropriate to professionals in the sector, Accountability and "managing the mission", Volunteerism, conflicts of interest in various situations. Roles of Non-Profit organizations in the public policy framing process, Examples of Key public policies, Ethical issues, in management of NPOs, developing a sustainable business model based on the social need. (5+1)

5.   **Performance of Non-Profit Organization:** Evaluating the   performance of Non-profit Organizations, Ethical Decision making in Non Profit Organizations, Volunteers and their role in Non Profit organizations. Incentives and control in the non-profit context. Non-profit governance, Non-profit organizations and market competition, sales promotion and Public Relations for Non- profit Organization. Managing Financial Resource, Donor Marketing. (5+1)

Suggested Text Books:
1.   Non-Profit Management: Principles and Practice…(Paperback) by Michael J. Worth
2.   How to Start, Run & Grow a Successful Non- Profit organization by Aaron Sanders
3.   Non-Profit organizations: Theory, management, policy by Helmut k. Anheier
4.   Developing Non-Profit and Human Service Leaders: Essential Knowledge and Skills, Watson, Larry D., Hoefer, Richard, 2014
5.   Kumar, R., Goel, S. L. (2005). Administration and Management of NGOs: Text and Case Studies. Deep and Deep Publications

Suggested Reference Books:
1.   Banerjee, G. D. (2012). NGOs: Issues in Governance- Accountability Policies 7 Principles. Neha Publishers & Distributors
2.   David Lewis (2014). Non-Governmental Organizations, Management and Development. Routledge Publication.
3.   NGOs AND SOCIAL WELFARE: New Research Approaches David Lewis and N. Avichandran (Eds.)
4.   Marketing of Non-Profit Organizations by Philip Kotler
5.   Elements of Mercantile Law, N.D.Kapoor

Semester IV		405 – Global Strategic Management
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO405.1	Remembering	Define the concept and key terms associated with the global strategic management.
CO405.2	Understanding	Describe in detail global strategic alliance, merger and acquisitions.
CO405.3	Applying	Demonstrate various global organisation models in global strategic management context.
CO405.4	Analyzing	Examine various entry and business-level strategies from global strategic management prospective.
CO405.5	Evaluating	Explain globalization, innovation, and sustainability and challenges to strategic management.
CO405.6	Creating	Design global strategies and understand their relative merits and demerits.

1. **Introduction:** The phenomenon of Globalisation Localisation and Glocalization, Factors that push globalisation, The benefits of globalisation, factors that work against globalisation, The localisation pushes, The benefits of localisation and Globalisation, The Global Integration/Local Responsiveness Grid. Strategy making strategy implementing and strategic managing; Globalization and strategic management; Strategic flexibility and learning organization. Competitive strategy and competitive advantage in global market. Assessing Countries' Attractiveness: Country attractive Market and industry opportunities, Assessing industry opportunities, Country risk analysis. (5+1)

2. **Market Intelligence and Designing a Global Strategy :** Market Intelligence: Drivers and Benefits, Key Success Factors of World Class Market Intelligence, Intelligence Scope, Intelligence Process, Intelligence Tools – Collecting, Storing, and Communicating Intelligence. Designing a Global Strategy: Entry strategies, Direct Exporting, Licensing, Partnering, Joint Ventures, Buying an organization, Piggybacking, Turnkey Projects, Greenfield Investments. Increased Market Size, Return on Investment, Economies of Scale and Learning, Location Advantages. (5+1)

3. **Global Strategic Alliances and Resources and Business-Level Strategy:** Strategic Alliances: Global versus local alliances, typology and framework, Value potential, Partner analysis, Negotiation and design, Implementation of alliance management, Global multilateral alliances, Alliance constellation management, Criteria for successful alliances. Global Mergers and Acquisitions: The rationale for cross-border M&As, Cross-border acquisitions performance, Deciding on the M&A, Integrating the companies: the integration phase, Integrating the companies: the transition phase, Integrating the companies: the consolidation phase (Case studies of global strategic alliances and global mergers and acquisitions are expected). (5+1)

4. **Designing a Global Organisation:** Structure, processes and culture, global functional model, geographical model, single matrix model, multi-business global product division model, multi-business geographical model, multi-business matrix model, Hybrid structural models, transnational model. (5+1)

5. **Globalization, Innovation, and Sustainability:** Challenges to Strategic Management: Impact of Globalization, Innovation, Sustainability, Theories of Organizational Adaptation, Creating a Learning Organization, Environmental Scanning, Strategy Formulation Strategy Implementation, Evaluation and Control, Feedback/Learning Process, Resources, Capabilities, and Core Competencies, Building Core Competencies, Four Criteria of Sustainable Competitive Advantage. Issues in global strategy implementation; strategy evaluation and control. (5+1)

Suggested Text Books:
1. Lasserre, Philippe, Global Strategic Management (4th Edition), Palgrave Macmillan, Bristol, Great Britain, 2003.
2. Michael Hitt, Duane Ireland and Robert Hoskisson, Concepts Strategic Management Competitiveness & Globalization (9th Edition), South-Western Cengage Learning Mason, USA, 2011.
3. Hans Hedin, Irmeli Hirvensalo, Markko Vaarnas, The Handbook of Market Intelligence Understand, Compete and Grow in Global Markets, John Wiley & Sons Ltd, West Sussex, United Kingdom, 2011.
4. Lorange, P. and J. Roos, Strategic Alliances: Formulation, Implementation, and Evolution, Blackwell, Oxford.
5. Gerardo R. Ungson and Yim-Yu Wong, Global Strategic
6. Management, Segment Books New Delhi, 2009.
7. Global Strategic Management, Kamel Mellahi, J. George Frynas, and Paul Finlay, Oxford University Press, New York, 2005.
8. Globalization and Business, Johnd Daniels, Leeh. Radebaugh, and Daniel P. Sullivan, Prentice Hall of India Private Limited, New Delhi, 2002.

Suggested Reference Books:
1. Thomas Wheelen and David Hunger, Strategic Management and Business Policy - Toward Global Sustainability (13th Edition), Pearson Education, New Jersey, USA, 2012
2. Thomas Wheelen, David Hunger, Alan Hoffman and Charles Bamford, Strategic Management and Business Policy Globalization, Innovation, and Sustainability (14th Edition) Pearson Education Limited, Essex, England, 2015
3. Davidson, W.H., Global Strategic Management, John Wiley, New York.
4. Eayerweather, W.H. International Business Strategy and Administration Ballinger Publishers, Cambridge Mass.
5. Hitt, Michael A., R.Duane Ireland and Robert E. Hokisson, Strategic Management: Competitiveness and Globalization, 4th Ed, South Western College Publishing, Australia, 2001.

Semester IV		406 – Technology Competition and Strategy
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO406.1	Remembering	DEFINE the key terms and concepts.
CO406.2	Understanding	EXPLAIN how technology affects strategic interactions among firms and consumers
CO406.3	Applying	DETERMINE the linkages Technology & Business Strategies
CO406.4	Analyzing	EXAMINE the technology environment of a firm.
CO406.5	Evaluating	APPRAISE the risks pertaining to technology and competition.

1. **Technology & Competition:** Competitive Domains, Competitive Consequences of Technological Change – Creation of New Products, Changes in the Value Chain, Changes in the Value Constellation, Competitive Rivalry. Technological Characteristics of Competitive Domains – Technological Opportunity, Appropriability, Resource Requirements, Collateral Assets, Institutional Milieu, Speed. Dynamics of Change in the Competitive Domain – Technology Emergence Phase, Incremental Change Phase. Framework for Analysis of Technology Emergence, Influence of Environmental trends on competition. Technology as critical to Business Outcomes – Technology Strategy and Technology Leadership. (5+1)

2. **Technology Intelligence:** Signals of New Technology, What is Technology Intelligence, Importance of Technology Intelligence, Levels of Technology Intelligence, External versus Internal Technology Intelligence. Mapping the Technology Environment – Steps in Mapping, Mapping the Macro-level and Industry Level Environment. Mechanisms for Data Collection – Challenges, Organizational Arrangements and Key Principles for Data Collection. Contemporary Challenges in Mapping the Technology Environment. (5+1)

3. **Business Strategy and Technology Strategy:** Business Strategy , Strategic Analysis and Decision Making using Product Evaluation Matrix, Market-Growth- Market-Share Analysis Matrix, X-Y Coordinating Method, M-by-N Matrix, SWOT Matrix, Formulation of Technology Strategy, Core Competencies, Exploitation of Core Competencies, Integration, Linking Technology & Business Strategies, Creating the Product-Technology-Business Connection. Technology's Interface with – Market, Customers and Suppliers. Customer-Supplier and Product-User relationships. (5+1)

4. **Technology Strategy Choice:** Technology – Business Connection, Domains of Technology Choice, Linkages between Technology Choice and Competitive Advantage, Technology Strategy Definition, Role of Chief Technology Officer, Key principles underlying Technology Strategy – Objectives, Drivers, Decision criteria. Technology Strategy Types – Appropriateness of the Technology Strategy Types, Diversified Firms, A Framework for formulating Technology Strategy – Strategic Diagnosis, Formulation of Technology Strategy, Crafting and Implementation Approach, Execution. Technology Strategy – Superior Performance Characteristics. Accountability to various Stakeholders, Performance Measurement. (5+1)

5. **Technology Strategy – Collaborative Mode:** Collaborative Arrangements – Definitions, Trends, R&D Alliances, Marketing Alliances, Outsourcing Alliances, Collaboration between small and large firms, Strategic and Operational Reasons for Collaborative Arrangements. Collaborative Arrangements in the domain of Technology Strategy – Appropriation of technology, Deployment of technology in New Products, Deployment of technology in the Value Chain, Marketing of technology. Risks of Collaborative Activity – Intellectual Property Right Risk, Competitive Risk, Organizational Risk. Cases on R & D Collaborations, Global Technology Alliances. The form of Collaborative Arrangement. (5+1)

Suggested Text Books:
1. Managing Technology and Innovation for Competitive Advantage, V K Narayanan, Pearson Education.
2. Technology Management – Text and International Cases, Norma Harrison and Danny Samson, MGH.
3. Strategic Management of Technology & Innovation, Robert A Burgelman,Modesto A Maidique, Steven C Wheelwright, MGH International Edition.
4. Management of Technology – The Key to Competitiveness and Wealth Creation, Tarek Khalil and Ravi Shankar, TMGH, New Delhi.
5. Technology & Business Strategy – An Introduction, Edited by Prashanta Kumar Banerjea, ICFAI books.

Suggested Reference Books:
1. Managing Strategic Innovation and Change – A Collection of Readings, Michael L Tushman and Philip Anderson, Oxford University Press.
2. Management of Technology and Innovation – Competing through Technological Excellence, P N Rastogi, Response Books.
3. Utterback, James. "Invasion of a Stable Business by Radical Innovation." Chapter 7 in Mastering the Dynamics of Innovation. Cambridge, MA: Harvard Business School Press, 1994. ISBN: 9780875843421.

Semester IV		407 – Cyber Laws
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO407.1	Remembering	DEFINE the key terms and concepts pertaining to cyber laws.
CO407.2	Understanding	DESCRIBE the relevant legal provisions in detail.
CO407.3	Applying	DETERMINE the applicability of the legal provisions in a specific scenario.
CO407.4	Analyzing	OUTLINE the course of action in case of violation of the legal provisions.
CO407.5	Evaluating	EXPLAIN the various legal, social and international issues and the various remedies available under the Information Technology Act for the breach and commission of offence in cyber space

1. **Information Technology Act:** Evolution of the IT Act, Genesis and Necessity, Salient features of the IT Act, 2000; various authorities under IT Act and their powers; Penalties & Offences, amendments, Cyber Space Jurisdiction, Jurisdiction issues under IT Act, 2000. (5+1)
2. **E-commerce and Laws in India:** Digital/ Electronic Signature in Indian Laws, E-Commerce; Issues and provisions in Indian Law, E-Governance; concept and practicality in India, E-Taxation issues in Cyberspace, E-Contracts and its validity in India, Cyber Tribunal & Appellate Tribunal, Cyber Regulations. (5+1)
3. **Intellectual Property Rights:** Domain Names and Trademark Disputes, Concept of Trademark/ in Internet Era, Cyber squatting, Reverse Hijacking, Jurisdiction in Trademark Disputes, Copyright in the Digital Medium, Copyright in Computer Programmes, Copyright and WIPO Treaties, Concept of Patent Right, Relevant Provisions of Patent Act 1970. (5+1)
4. **Personal Data Security:** Sensitive Personal Data or Information (SPDI) in Cyber Law, SPDI Definition and Reasonable Security Practices in India, Reasonable Security Practices – International perspective, Cloud Computing & Law. (5+1)
5. **Cyber Law:** International Perspective, EDI : Concept and legal Issues, UNCITRAL Model Law, Electronic Signature Law's of Major Countries, Cryptography Laws, Cyber Law's of Major Countries, EU Convention on Cyber Crime. (5+1)

Suggested Text Books:
1. Cyber Law & Cyber Crimes by Advocate Prashant Mali, Snow White Publications, Mumbai
2. Cyber Law in India by Farooq Ahmad, Pioneer Books
3. Information Technology Law and Practice by Vakul Sharma, Universal Law Publishing Co. Pvt. Ltd
4. The Indian Cyber Law by Suresh T. Vishwanathan, Bharat Law House New Delhi

5.   Guide to Cyber and E- Commerce Laws by P.M. Bukshi and R.K. Suri, Bharat Law House, New Delhi
6.   Guide to Cyber Laws by Rodney D. Ryder, Wadhwa and Company, Nagpur

Suggested Reference Books:
1.   The Information technology Act, 2000, Bare Act- Professional Book Publishers, New Delhi
2.   Computer Forensics: Principles and Practices by Linda Volonino, Reynaldo Anzaldua and Jana Godwin; Pearson Prentice-Hall
3.   First Responder's Guide to Computer Forensics by Richard Nolan et al; Carnegi Mellon

Semester IV		408 – Corporate Social Responsibility & Sustainability
2 Credits	LTP: 2:0:0	Generic Elective – University Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO408.1	REMEMBERING	Enumerate the different concepts, legislative provisions, environmental aspects, best practices, complexity, scope, reports, social framework etc. related to CSR, business ethics & sustainability development.
CO408.2	UNDERSTANDING	Compare different CSR theories, cases, dimensions of Sustainability and demonstrate a multi stake holder perspective in viewing CSR, Business ethics & Sustainability issues etc.
CO408.3	APPLYING	Apply the different models, theories, approaches, cases etc. for implementation & monitoring of CSR activities & Sustainability and its impact on corporate culture & society at large.
CO408.4	ANALYSING	Analyze the different reports, cases, various legal issues relating to CSR, different sustainability reports and various national and global initiatives related to CSR, Business ethics & Sustainability.
CO408.5	EVALUATING	Evaluate the level of commitment of different organizations to CSR, Business ethics in attaining Sustainability development & show its competitive advantages.
CO408.6	CREATING	Create & Implement a CSR policy in attaining Sustainability development and its impact on various stakeholders.

1.   **Corporate Social Responsibility**: Fundamental Concepts, Nature and Significance of CSR.Principles of CSR: Accountability-Transparency-Sustainability. Concept of Charity, Corporate Philanthropy, Difference between Charity and Philanthropy, CSR as a key to business success. CSR as a Marketing and Brandingtool for the businesses, Strategic advantage of CSR, Corporate Citizenship, and Sustainable Business. Other main aspects: CSR and Corporate Governance, Environmental Aspects of CSR. Evolution and Implementation of CSR in India. Best Global Practices of CSR, OECD principles and CSR. **CSR Projects**: Conducting CSR activity by involving students at Institute level.(5 + 1)
2.   **CSR Legislations in India**: Section 135 of Companies Act 2013. Scope of CSR, Activities under schedule VII, Leadership and CSR. Identifying the key Stakeholders of CSR, CSR & Triple Bottom Line- 3 aspects (Economic, Social, and Environmental). Role of Public sector, Non Profit Organizations and Local self-Governments in implementation of CSR projects. Contemporary issues andhurdles in CSR. Current Trends and Opportunities in CSR, including a Strategic Business tool for sustainable Development. CSR and Business Ethics, Effect of Globalization on CSR, CSR Funds- Criteria & Policies with legal framework. **Case studies**: Major CSR Initiatives. **Project Work**: Interview of CSR head of any Organization.   (5+1)
3.   **Introduction to Sustainability & Sustainable Development:** Definition & Concept of Sustainability & Sustainable development, need, importance, education, Philosophical development, Gandhian Thought on Sustainable Development, Sustainable Development and social framework, equitable distribution, difference between sustainable development and green development, criticism, 17-Point charterunder United Nations agenda for Global Peace and Sustainable Development – 2030. Sustainability report. **Stakeholder Impact:** Stakeholders and the power they wield, Reducing socio- environmental costs and risks: managing the downside, driving revenues and creating intangible value: managing the upside. **Cast Study** – Bhutan Case for Inclusive Growth on Environment protection and Reducing carbon footprints, IKEA Company & Sustainability (5+1)
4.   **Dimensions of Sustainable Development: (a) Environmental:** Natural Resources & Resource Depletion, Management of human energy consumption, Solid waste generation & waste management, Global Greenhouse

emission, Air & Water Pollution and Climate Change, Ozone Hole NASA report. Understanding ecological "footprint": Eco-tracking, carbon marketing, carbon credits, economics of sustainability, Designing for the environment and 'greening' the supply chain, regulation. **(b) Economic:** Achieving economic growth with minimal Environmental degradation, Nature as an economic externality, economic opportunity, introduction & implementation of inclusive growth models for rural development, Sustainable livelihoods for tribal communities. **(c) Social:** Peace, Security, Social equity & justice, Sustainability and poverty, Human relationship with nature, Human-Nature conflicts, human settlements. **Role of Stakeholders:** Stakeholder's Engagement, Study of business models for sustainable development: Indian & Global perspectives **Role of Volunteers:** Role of NGO's, Industries & citizens' participation in sustainable development **Project:** Prepare a report on how the countries like Sweden, Denmark etc. are achieving the UN sustainable development goals by performing well in Social & economic issues (5+1)

5. **Sustainable Development & Business Ethics: Sustainability reporting:** Triple bottom line reports - The content of sustainability reports (also CSR reports, ESG reports, social and environmental reports) **Social accountability standard - ISO 26000:** Social responsibility guidance standard, Global Compact Principles, Environmental Impact Assessment, Life Cycle Analysis, Social Impact Assessment. **Indian Values and Ethics:** Respect for Elders, Hierarchy and Status, Need for Security, Non – Violence, Cooperation, Simple Living high Thinking, Rights and Duties, Ethics in Work life, Holistic relationship between Man and Nature, Attitudes and Beliefs. **Project:** Student to study the Covid-19/ any other current crisis, do a desk research and submit the report.(5+1)

Suggested Text Books:
1. CSR & Sustainability by Michael Hopkins
2. Corporate Social Responsibility by David Crowther and Guler Aras
3. Corporate Social Responsibility in India by Sanjay K Agarwal
4. Triple Bottom Line Reporting and Corporate Sustainability by S Singh, PHI – Eastern Economy Edition.
5. Ethics, Business & Society Edited by Ananda Das Gupta, Response Books
6. Business Ethics by Crane and Matten, Oxford University Press, 2nd Edition.
7. Business Ethics – An Indian Perspective, by Ronald Francis and Mukti Mishra, TMGH.

Suggested Reference Books:
1. Corporate Social Responsibility in India, Cases and Developments after the legal Mandate, Nayana Mitra and Rene Schmidpeter
2. CSR Strategies-for a competitive edge in emerging markets by Sri Urip
3. The Sustainable Enterprise –Profiting from best practice by Simmons and Simmons, Kogan Page,2nd Edition.
4. Business Ethics – Text and Cases by CSV Murthy, Himalaya Publications, 2nd Revised Edition.
5. Case Studies on Ethics and Corporate Governance Vol I and II, ICFAI Books
6. Target 3 Billion- Innovative Solutions Towards Sustainable Development , A.P.J. Abdul Kalam, Srijan Pal Singh

Websites
www.india.gov.in
https://www.un.org

Journals
1. Business & Society
2. Journal of Business Ethics
3. Ethics & Accountability in a Context of Governance & New Public Management

E-Resources

https://www.youtube.com/watch?v=dy8kit9gnbM
https://www.youtube.com/watch?v=47Wtk0sGOng
https://www.youtube.com/watch?v=elPdTts3La4
https://www.youtube.com/watch?v=PDyzNBcD2nM
https://www.youtube.com/watch?v=yv_e1fy3Gsk
https://www.youtube.com/watch?v=FqyaYljTjEw

Subject Core (SC) Courses - Semester III

Specialization: Marketing Management

Semester III	SC – MKT- 03	304 MKT : Services Marketing
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304 MKT.1	REMEMBERING	RECALL the key concepts in services marketing
CO304 MKT.2	UNDERSTANDING	EXPLAIN the role of Extended Marketing Mix in Services
CO304 MKT.3	APPLYING	DEMONSTRATE the new Paradigm and Perspectives in Marketing of Services
CO304 MKT.4	ANALYSING	ANALYSE the significance of services marketing in the Indian and global economy
CO304 MKT.5	EVALUATING	EVALUATE Segmentation, Targeting & Positioning of Services in dynamic marketing environment
CO304 MKT.6	CREATING	DEVELOP marketing mix for various services offering

1. **Services Marketing- An Insight into Emerging Sector of Economy**
Introduction, Nature & Definition of Services, Difference between goods & Services: Service-Continuum, Key classifications of the Services, Service Characteristics; Traditional elements of Services Mix; Need for extended marketing mix elements in Services. Need to study Service Marketing: Evolution of Services as Value Contributors, Service Sector beyond 2020 - Indian, Asian & Global perspectives **[6+2]**

2. **Role of Process, People& Physical Evidence in Services Marketing:**
Process - Service system - Service system, Servicescape and Servuction system, Importance of Process in Services; Service Blueprint; Mapping the Process- Horizontally & Vertically; Variety in Service Process; Value addition in Process.
People- The Key to a Service Marketing; People Dimensions in Services Marketing; Service Encounters; High-Contact & Low-Contact Services; Emotions in Service Situations; Service Profit Chain; Service Culture Physical Evidence- Contribution of Physical Evidence to the Service Understanding, Managing the Physical Evidence in Service Marketing [8+2]

3. **Managing Consumer Behaviour& Service Quality:**
Consumer and Organisational Behaviour in Services – Understanding Our Customers & Collaborators in services, stages of service consumption Service Quality- Levels & Dimensions; Service Quality Models - ServQual, GAP Model and Critical Incident Model. Managing demand and capacity - capacity constraints, understanding demand patterns, strategies for matching and adjusting capacity and demand Service Recovery, Service Recovery Process, Impact of Service Failures, Nature of Complaining Behaviour-Complaint Resolution*[7+2]*

4. **Segmentation, Targeting & Positioning of Services in Modern Era:** Bases for Segmentation of Services; Selecting Target Market & Approaches; Techniques of Positioning Services. Managing of Relationships in Services Marketing, service marketing triangle, Current customer retention and customer lifetime value.
Service Marketing Strategies for Small and Medium Enterprises: Importance & Challenges. *[7+2]*

5. **Marketing of Services: New Paradigm and Perspectives:**
Customer as the Centre of Attention; Services as Key Differentiators; New Service Opportunities: Emergence of Work from Home, Automation & New Technologies in Services; Service Marketing Opportunities in India
Applications of Service Marketing: Marketing in Tourism, Retail, Hospitality, Airlines, Telecom, IT & ITES, Sports & Entertainment, Logistics, Health Care Sector, Event Management Services and Banks & Financial Sector, Non-Profit Organisations*[7+2]*

(Relevant cases must be discussed for the above all units)

Suggested Text Books
1. Service Marketing Concepts Applications & Cases Mk Rampal,Sl Gupta, Galgotia Publishing Company
2. Services Marketing: People Technology Strategy, by Wirtz Jochen (Author), Lovelock Christopher (Author), Chatterjee Jayanta, Pearson Education; 8th edition (2017)
3. Services Marketing by Zeithaml, Bitner, Gremler& Pandit, TMGH, 4th Edition
4. Services Marketing: Global Editionby Christopher Lovelock (Author), Jochen Wirtz, Pearson Education; 7 Edition

5. Services Marketing- Valarie A Zeithaml, Mary Jo Bitner, Dwayne D. Gremler, Ajay Pandit, Mcgrawhill

Suggested Reference Books
1. Service Management: Operations, Strategy, and Information Technology, James A. Fitzsimmons, Mona J. Fitzsimmons, McGraw-Hill/Irwin, 2006
2. Services Marketing: Concepts and Practices by Ramneek Kapoor, Justin Paul &Biplab Halder, McGraw Hill
3. Services Marketing by Rajendra Nargundkar, McGraw-Hill, 3rd Edition
4. Services Marketing, 2nd Edition by Rao -Pearson
5. Service Marketing - by C. Bhattacharya,Excel Books
6. Services Marketing – K. Rama Mohana Rao, Pearson; 2 edition (2011)

Suggested Audio Visuals link
1. https://www.youtube.com/watch?v=5MBEHY7Q0Ls
2. https://www.youtube.com/watch?v=xFvbgddv7C4
3. https://www.youtube.com/watch?v=1zYsQSJvbog
4. https://www.youtube.com/watch?v=MnsVEKEqVoM

Suggested Journals
1. Journal of Services Marketing Information
2. Journal of Services Marketing; Emerald Group Publishing Ltd.
3. International Journal of Service Marketing (IJSM)

Suggested Swayam Course
1. Services Marketing: A Practical Approach Indian Institute of Technology, Kharagpur and NPTEL via Swayam
2. Services Marketing - The Next Level via OpenLearning
3. Service Marketing: A practical approach By Prof. Dr.Biplab Datta
4. Services Marketing: Integrating People, Technology, Strategy By Prof. Zillur Rahman

Semester III	SC – MKT- 04	**305 MKT : Sales & Distribution Management**
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO305MKT.1	REMEMBERING	DESCRIBE the theoretical concepts related to Sales Management and Distribution Management Domain
CO305MKT.2	UNDERSTANDING	UNDERSTAND the concepts, techniques and approaches required for effective decision making in the areas of Sales and Distribution.
CO305MKT.3	APPLYING	APPLY the concepts related to sales and distribution management.
CO305MKT.4	ANALYSING	ANALYZE the real life scenarios of sales and distribution management.
CO305MKT.5	EVALUATING	EVALUATE the existing sales and distribution strategies and approaches.
CO305MKT.6	CREATING	DEVELOP generate and evaluate sales and distribution strategies.

1. **Overview of Sales Management:**
   a. Meaning, Evolution, Nature and importance of sales management, Strategic role of sales management, Objective and functions of sales management, Emerging trends in Sales Management,
   b. Careers in Sales Management; Skills required for Sales Managers.
   c. Impact of Technology on Sales: ERP, Social Platforms, Introduction of Sales Force Automation Systems (SFA) and Mobile technology in sales. **(8+2)**

2. **Organizing the Sales Force:**
   a. Sales Organization - meaning, Objectives & Structures of Sales Organization, Recruitment, selection and training the sales force, motivation to sales force, Compensation and Evaluation of Sales Force. Duties and Responsibilities of Sales Managers and the Effective Sales Executive.

b. Personal Selling: Objectives; Personal Selling Process; Relationship selling, (Primary, Secondary etc. Selling). **(5+2)**

3. **Sales Planning and Control:**
   a. Sales Planning Sales Forecasting & Budgeting, Sales Quotas and Targets.
   b. Sales Control: Reporting Formats for Primary and Secondary Sales, Monthly Sales Plan, Territory Sales and Coverage Plan, Daily Sales Call Report, Expired Goods and Breakage Return Report, Fortnightly Sales Review Report, Order Booking Report, Monthly and Quarterly Sales Report.
   c. Sales Audit: Sales Force Productivity Indicators (Value and Volume); Territory Productivity, per Person per Month Productivity, Sales to Marketing Expenses Ratio. **(7+2)**

4. **Distribution Management:**
   a. Distribution Management: Introduction, need and scope of distribution channels; Marketing channels strategy; Levels of channels; Designing Channels; Selection and Recruitment of Channel Partners; Channel Conflicts; Techniques to resolve channel conflicts;
   b. Channel Management Decisions; Channel policies, Concept of Vertical Marketing System (VMS) and Horizontal Marketing System (HMS)
   c. Channel Information System: Meaning, purpose, Developing channel information system, Elements of Channel Information System, Channel performance evaluation criteria
   d. Franchising: Significance and importance of Franchisee in Channel Decision; Advantages of Franchisee; Process of appointment of Franchisee; Franchiser-Franchisee relationship. ROI calculation at Dealer Level. **(8+2)**

5. **Wholesaling, Retailing & Logistics Management:**
   a. Wholesaling: Meaning, functions, classification of wholesalers, Major wholesaling activities and decisions
   b. Retailing: Meaning, Types ofRetailers and retailing formats, Retail strategies, E-Tailing: Structure and Developments in E-tailing, Advantages & Disadvantages of E-Tailing.
   c. Concept & scope of logistics, Components of logistics - warehousing decisions, Transportation decision, Inventory management decisions: Concept of EOQ, ROP, JIT, online inventory management.
   d. Concept and scope of Supply chain management, Components of Supply Chain Management. **(7+2)**

Note: Case studies and real business world scenarios to be used at the time of teaching

Suggested Text Books:
1. Sales and Distribution Management by Havaldar & Cavale, TMGH
2. Sales Management by Still, Cundiff & Govani, Sandeep Puri Pearson Education
3. Sales and Distribution Management by SL Gupta, Excel books
4. Retail Marketing by Swapna Pradhan TMGH
5. Retailing Management by Michael Levy & Barton Weitz, TMGH
6. Handbook of Logistics & Distribution Management by John L. Gattorna, Jaico Books

Suggested Reference Books:
1. Sales and Distribution Management- Tapan K Panda, Sunil Sahadev, Oxford Higher education.
2. Sales and Distribution Management – A Nag, McGraw Hill Publication
3. Management of Sales Force-Rosann Spiro, William Stanton, Gregory Rich; TMGH
4. Retail Management by Gibson Vedamani , Jaico Books
5. Retail Management by Bajaj, Tuli , Shrivastava, Oxford
6. What the CUSTOMER wants you to KNOW by Ram Charan; Penguin Books India Pvt. Ltd.

Online data source: https://bookboon.com/en/search?query=sales+management

Suggested on line Courses
1. Sales and Distribution Management By Prof. Sangeeta Sahney   IIT Kharagpur
2. Sales Training: Practical Sales Techniques-Udemy

3. The Art of Sales: Mastering the Selling Process Specialization-Coursera

	Subject Elective (SE) Courses - Semester III Specialization: Marketing Management	

Semester III	SE -IL -MKT- 07	**312 MKT: Business to Business Marketing**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO312 MKT.1	REMEMBERING	DEFINE the terms and concepts related to Business to Business marketing
CO312MKT.2	UNDERSTANDING	EXPLAIN the terms and concepts used in business to business marketing
CO312 MKT.3	APPLYING	IDENTIFY challenges and opportunities in Business-to-Business Marketing.
CO312 MKT.4	ANALYSING	FORMULATE segmentation, targeting and positioning, consumer buying behaviour and marketing mix in the context of Business to Business marketing
CO312MKT.5	EVALUATING	DESIGN marketing mix elements considering business-to-business sales and service situations.
CO312MKT.6	CREATING	DEVELOP marketing plan for business-to-business Marketing situations.

1. **Overview of Business-to-Business Marketing**
   Introduction to Business-to-Business Marketing: Business, Organizational & Government Markets, Business Myopia, Organizational Buying Behaviour, Concept of the Business-to-Business (B2B) Marketing,
   Comparison of Business-to-Business &Business-to-Consumer Marketing.
   Buying Situations, Buy grid Framework, Role of Buying Centre,
   Models of B2B Marketing – Webster & Wind Model, Sheth Model, Impact of Macro/Micro Environmental factors on decision making. **[3+1+1]**
2. **Segmentation, Targeting & Positioning for B2B Markets:**
   Market Segmentation Bases: Macro Variables - Industry Characteristics, Company Size, Customer Location, End User Markets, product Applications. Micro Variables: Customer Interaction needs, Organizational Capabilities, Purchasing Policies, Purchasing Criteria, and Personal Characteristics.
   Target Markets: Concentrated Marketing, Differentiated Marketing, Undifferentiated Marketing. Criteria used for choosing a target market.
   Positioning **[3+1+1]**
3. **Product and Pricing Strategy for B2B Markets**:
   Industrial Products: Definition of an Industrial Product, Industrial Product Lifecycle & Strategies across the PLC, Product strategies for New Products and Existing Products, Costs, volume and Experience curve.
   After Sales Service – Importance, Use of Innovation, Competitiveness & Technology.
   Strategies used for marketing of Projects, Industrial Services, and High technology products.
   Pricing: Factors influencing Pricing Decisions, Pricing Strategies – Competitive bidding,
   Pricing of New Products, Pricing Policies, Commercial Terms and Conditions, Contracts, Hiring & Leasing, Negotiation, Bargaining, Persuasion & Conviction. Methods used to Influence Industrial Customers, Special Dealing between Buyer and Sellers, Reciprocity, Ethical Issues. International Market based Pricing **[6+1+1]**
4. **Promotion Mix for B2B Markets:**
   Personal Selling: Role & Characteristics of Personal Selling, Development & Management of Sales Force, Key Account Management - ABC Analysis of Industrial Customers.
   Promotions: Developing Industrial Communication Program, Trade Shows, Exhibitions, Catalogues, Samples, Public Relations, and Advertising. **[4+1+1]**
5. **Distribution Channels and Current Trends for B to B markets :**
   Distribution Channels: Distinctive Nature of B To B Distribution Channels, Types of Industrial Middlemen, Channel Flow Design, Formulating Distribution Strategies and Cost Benefit Analysis.

Current Trends for B to B markets: Use of Social Media, Use of technology in branding, Use of digital platforms by B to B organizations, Virtual Marts. **[4+1+1]**

Suggested Text Books:
1. Industrial Marketing: Text and Cases Krishna K. Havaldar Tata McGraw-Hill Education
2. Industrial Marketing By Hill, Alexander and cross, Irwin
3. Industrial Marketing by Mukerjee, Excel Book

Suggested Reference Books:
1. Business to Business Marketing by Ross Brennan, Louise Canning, Raymond Macdowell
2. industrials Marketing by Mathur,New age international Publishers

Supplementary Reading Material:-Marketing White Book (Latest edition)
Websites:- http://www.commerce.nic.in/
Journals:
1. Industrial Organization and Customer Relationship Management: The Impact on Customer Service Orientation in B-to-B Markets by Lancioni, Richard; Smith, Michael; Stein, Alex.,Journal of Management& Public Policy. Jul-Dec2009, Vol. 1 Issue 1, p57-88.
2. My years with B2B Marketing in India: Reflections and Learning's from A Journey of 40 Years by Sarin, Sharad.,Journal of Business &Industrial Marketing. 2012, Vol. 27 Issue 3, p160-168
3. Approaching Global Industrial Marketing from a Managerial Cognition Perspective: A Theoretical Framework by Madhavaram, Sreedhar; Badrinarayanan, Vishag; Granot, Elad., Journal of Business &Industrial Marketing. 2011, Vol. 26 Issue 7, p532-541
4. The Marketing Mix Revisited: Towards the 21st Century Marketing by Constantinides, E.,Journal of Marketing Management. Apr2006, Vol. 22 Issue 3/4, p407-438
5. Marketing-Industrial Design Integration in New Product Development: The Case of China by Zhang, Dan; Hu, Peng; Kotabe, Masaaki.Journal of Product Innovation Management. May2011, Vol. 28 Issue 3, p360-373

Suggested MOOCs:
1) International B2B (Business-to-Business) Marketing on Coursera
2) B2B Marketing Foundations Training (LinkedIn Learning – Lynda),
3) B2B Pricing Strategy Online Program (IMD),

Semester III	SE -IL -MKT- 08	**313 MKT: International Marketing**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO313MKT.1	REMEMBERING	ENUMERATE various terms and key concepts associated with international marketing.
CO313MKT.2	UNDERSTANDING	EXPLAIN various key concepts used in all aspects of international marketing.
CO313MKT.3	APPLYING	APPLY all stages in international marketing management process.
CO313MKT.4	ANALYSING	EXAMINE various facets of international marketing environment and the relevant aspects of international marketing management process from a data driven decision perspective.
CO313MKT.5	EVALUATING	JUDGE suitability of alternative market segmentation bases, target market selection, market entry strategies, positioning strategies and international marketing mix strategies based on Assessment of international marketing environment.
CO313MKT.6	CREATING	DESIGN appropriate market segmentation, target market, market entry strategies, positioning strategies and international marketing mix strategies for business organizations.

1. Introduction: Meaning, Nature, Scope and Importance of International Marketing; Management Orientations in the context of International Marketing – EPRG Framework; Overview of International Marketing Management Process; International Marketing Environment and Its Effect on International Marketing – Economic Environment, Trade Environment, Social and Cultural Environment, Political Environment, Legal and Regulatory Environment, Demographic Environment, Natural Environment, Technological Environment. **[4+1+1]**

2. **Approaching International Marketing:** International Marketing Information System and International Marketing Research; International Market Segmentation; Target Market Selection; International Market Entry Strategies; International Positioning Strategies.**[3+1+1]**

3. **International Marketing Mix I:**
   a) **International Product Planning:** Major Product Decisions-Product Features and Quality, Product Design, Branding, Packaging, Labeling, and Product Support Services; Product Standardization vs. Adaptation; New Product Development;IPR Issues; International Product Life Cycle; Managing Product Mix and Product Line.
   b) **Pricing for International Markets:** Factors affecting International Price Determination; Pricing Strategies for International Markets; Price Quotations and Terms of Sale, Delivery and Payment; Dumping; Gray Market; Transfer Pricing.**[4+1+1]**

4. **International Marketing Mix II:**
   a) **Managing International Promotion:** International Promotion Mix Decisions: Advertising, Sales Promotion, Public Relations and Publicity, Personal Selling, Direct Marketing; Standardization vs. Adaptation issue; Developing International Promotion Campaign.
   b) **Managing International Distribution:** Designing International Distribution Channels; Management of International Distribution Channel; Distribution Channel Dynamics; International Logistics Management.**[5+1+1]**

5. **Managing International Marketing in 21st Century:** Patterns of International Marketing Organization; Leadership; Digital Revolution and International Marketing; Developing International Competitiveness; Ethics, CSR and Social Responsiveness in Globalization Era. **[4+1+1]**

Suggested Text Books:
   1. Global Marketing Management by Keegan Warren J. andGreen M.C. Pearson Education.
   2. International Marketing: Analysis and Strategy by SakOnkvisit and John Shaw, Prentice Hall of India.
   3. International Marketing by Cateora, Graham and Salwan, McGraw-Hill.
   4. International Marketing Management by Subhash Jain, CBS Publishers &Distributors.
   5. International Marketing by Rakesh Mohan Joshi, Oxford University Press.
   6. International Marketing by Rajgopal, Vikas Publishing House.

Suggested Reference Books:

1. International Marketing by CzinkotaandRonkainen, Cengage Learning.
2. Global Marketing Management by Kotabe and Helsen, Wiley Publication.
3. International Marketing by Terpstra Vern and Sarathy Ravi, The Dryden Press.
4. Global Marketing by Svend Hollensen, Prentice Hall.
5. International Marketing: An Indian Perspective by Varshney R. L. and Bhattacharya B., Sultan Chand and Sons.
6. International Marketing by PK Vasudeva, Excel Books.

Semester III	SE -IL -MKT- 09	**314 MKT: Digital Marketing II**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 314MKT.1	REMEMBERING	DEFINE the key terms and concepts related with digital marketing
CO 314MKT.2	UNDERSTANDING	EXPLAIN various tools of digital marketing.
CO 314MKT.3	APPLYING	MAKE USE OF various tools of digital marketing.
CO 314MKT.4	ANALYSING	CLASSIFY the different tools and techniques of digital Marketing with respect to SEO, SEM and SMM to increase the customer acquisition and retention.

CO 314MKT.5	**EVALUATING**	ASSESS the suitability of Digital Marketing Tools w.r.t. SEO, SEM and SMM to increase cost-effectiveness in specific marketing situations.
CO 314MKT.6	**CREATING**	DEVELOP appropriate digital marketing campaign.

1. Digital Marketing and its Role in Global Context:

1.1 Concept, Role and Importance of Digital Marketing, Digital Marketing Vs. Traditional Marketing, Digital Marketing Process, Phygital marketing, Omni channel marketing, E-commerce & new trends in current scenario of the world.

1.2 Digital Marketing Environment, Digital Micro Environment, Understanding micro marketing elements in the digital marketing context

1.3 Digital Macro environment in India, PESTAL Analysis, National factors, global factors, role of cyber policy and digital commerce policy, Global Perspective of Digital Marketing **(4+1)**

2. Applying Segmentation, Targeting and Positioning to Digital Marketing:

2.1 Segmentation: Concept, Need & Benefits, Criteria for segmenting Digital Audience - Geographic, Demographic, Psychographic, Behavioral segmentation.

2.2 Targeting Online Customers – Business, Government and Customer Markets.

2.3 Product Positioning, Sectoral perspective in digital marketing applications with the help of case studies.

2.4. Overview of Marketing Mix in digital marketing context.**(4+1)**

3. Search Engine Optimization (SEO) Tools and Techniques:

3.1 Introduction to SEO concept and role in digital marketing: Understanding Search Engine Optimization: Search Engine Optimization (SEO), Features of SEO, Significance of SEO.

3.2 Model used in Digital Marketing, The Five Stage AACRO POEM model, Inverted Pyramid in SEO , Content Drilldown, E3model, Understanding Web and Mobile Marketing perspective.

3.3 Key SEO tools, Application and Functions Google Domain, Google my business, Google Search Console, Google Trends, Google Tag manager, SEM Rush, Domain Authority Score, Inbound Marketing.

3.4 Overview of Inbound Marketing: Essentials of an Effective Inbound Strategy, Optimizing Your Website for SearchEngines,Convert Visitors in Leads, Creating Content with a Purpose, Lead & its generation online, Relevant Lead and Converting Visitors into Lead, Converting Leads into Sales. **(5+2)**

4. Search Engine Marketing (SEM) Tools:

4.1 Search Engine Marketing (SEM), Comparison between SEO and SEM, SMM and Keywords, Terminologies associated to SEM, Pay Per Click (PPC), Cost per Click (CPC), Search Engine Results Page (SERP), Click-Through Rate (CTR), Impressions, Google Display Network (GDN).Understanding Web and Mobile Marketing perspective.

4.2 Key SEM tools, Applications and functions, Google Ads, Google Analytics, Google Admob, Google Adsense, Google Marketing Platform, Google Shopping Campaign, Word stream advisor.

4.3 The Fundamentals of Blogging, Amplifying Your Content with Social Media, Enticing Clicks with Calls-to-Action, the Anatomy of a Landing Page, Optimization Thank You Page, Sending the Right Email to the Right Person, Hob Spot Inbound Marketing Certification.

4.4 Understanding the concept of Website Analytics, Different types of Web Analytics, Social Web Analytics, Mobile Web Analytics, Conversion Web Analytics, Key Performance Indicators, Google Analytic, Benefits of using Google Analytics, Clicky vs. Google Analytics, Website Traffic Measurement Metrics.

4.5 Affiliate Marketing, Influencer marketing,
What is Traffic? Type of Traffic How to analyze & Track Traffic (Google analytics), Ways to Increase Traffic, What is affiliate Marketing, Cost per Action (CPA) **(5+2)**

5. Social Media Marketing (SMM), B to C Perspective, B to B Perspective:

5.1 Introduction to Social Media, Advantages Over Online Marketing, Social Media Strategy. Understanding Web and Mobile Marketing perspective.

5.2 Facebook Marketing: Understanding of Facebook Marketing, Types of Facebook Advertising, Creating first ad on Facebook, Setting Campaign and optimization, Facebook Power Editor, Facebook Video Marketing, Facebook App & Shopping Marketing, Facebook ad library, Traffic and Leads Generation.

5.3 Twitter Advertising: Twitter Advertising, Types of Twitter Advertising, Creating first ad on Twitter Setting Campaign and optimization, Create conversion code, Twitter App Advertising, Twitter Video Advertising Leads & Traffic Advertising Increase followers, Twitter Marketing, Strategy and Planning, Tracking and Conversion.

5.4 Youtube Marketing: YouTube Marketing Strategy, Find Video Ideas with Competitor Analysis, Find Video Ideas with Keyword Research, Find Video Ideas with Keyword Research, YouTube Account Setup (Create business account with personal account), YouTube Account Optimization, YouTube Banner, YouTube Channel Tags , YouTube SEO ,Enable Custom Thumbnails, Manage Multiple YouTube Accounts , YouTube Monetization, YouTube Ads, YouTube Analytics.

5.5 Pinterest Marketing: Why market your business on Pinterest, Pinterest account setting, Pinterest account to follow, Pinterest account optimization, account verification, Pinterest board, Pinterest follower, Pinterest graphics, Pinterest chrome extension.

 5.6 Instagram Marketing: Instagram Business Account Setup, Follow These Instagram Accounts, Instagram Profile Image, Instagram Bio, Instagram Content Creation, Instagram Reposting, Instagram Followers Hack , Instagram Hashtags, Instagram Stories, Instagram Spam (reduce spam), Instagram Analytics.

5.7 LinkedIn Advertising: What is LinkedIn advertising? Creating first ad on LinkedIn, Setting Campaign and optimization, Create conversion code, Types LinkedIn Advertising, LinkedIn New feed Advertising, LinkedIn Message Advertising, Traffic and Leads Generation, Billing and Report. **(5+1)**

Suggested Text Books:
1. Internet Marketing, Dave Chaffey, Fiona Ellis-Chadwick, Kevin Johnston, Richard Mayer, Pearson Education.
2. Digital Marketing, Oliver J Rich.
3. Online Marketing, Gerry T. Warner and Joe Wilson Schaefer.

Suggested Reference Books:
1. Digital Marketing, Prof. Seema Gupta, Mcgraw Hill Publications.
2. E- Marketing by Judy Strauss, Adel Ansary, Raymond Frost, Prentice Hall.
3. Social Media Marketing All-In-One for Dummies, Jan Zimmerman and Deborah.
4. Google Adwords for Beginners: A Do-It-Yourself Guide to PPC Advertising, Cory Rabazinsky.
5. Email Persuasion: Captivate and Engage Your Audience, Build Authority and Generate More Sales with Email Marketing, Ian Brodie

Supplementary Reading Material:
1 Journal of Internet Marketing and Advertising.
2. International Journal of Electronic Commerce.
3. International Journal of Electronic Retailing and Marketing.
4. International Journal of Online Marketing.

Websites:
1.   https://www.smartinsights.com/digital-marketing-strategy/customer-segmentation-targeting/segmentation-targeting-and-positioning/
2.   www.ibef.org
3.   www.salesforce.com/Digital/Marketing

Suggested MOOCs:
1.   Fundamentals of Digital Marketing- By Google
     https://learndigital.withgoogle.com/digitalunlocked/course/digital-marketing
2.   Digital Tools Certification- By Google
     https://skillshop.exceedlms.com/student/catalog
3.   Online SWAYAM certification
     https://swayam.gov.in/nd2_ugc19_hs26/preview

Audio Visuals Link:
1.   Free You Tube Channel of Prof. Seema Gupta, IIM , Bangalore:
     https://www.youtube.com/channel/UCBDgBiaon_9MMMVCumg-v1g
2.   Free You tube Channel of Ankur Agarwal:
     https://www.learndigitalmarketing.com/?source=ga_ldm_default&gclid=EAIaIQobChMIxIHy65aO6QIVA5GPCh0jWw4ZEAAYAiAAEgIpE_D_BwE

| Semester III | SE -IL -MKT- 10 | **315 Marketing of Financial Services - II** |

2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO315MKT.1	REMEMBERING	RECALL the key concepts of the Indian Banking system.
CO315MKT.2	UNDERSTANDING	EXPLAIN the fundamental changes in banking and financial markets as financial institutions.
CO315MKT.3	APPLYING	DEMONSTRATE the skills and knowledge required to understand and Need based pitching of the financial Products to the targeted customers.
CO315MKT.4	ANALYSING	OUTLINE the growth & service offerings of wealth management in global & Indian context.
CO315MKT.5	EVALUATING	ASSESS the customer touch-points and customer-buying journey for financial services.
CO315MKT.6	CREATING	CREATE the marketing strategy for financial products.

1. Concept, Nature, and Scope of the banking system in India. Regulatory framework of the Indian Banking system; Growth of banking sector in India; Role of banks in the economy and the importance of banking in the economy. **An overview of the banking functions of Indian Banking & Non-banking financial institutions (NBFC)**. Understanding trends and challenges in Indian banking system. Cash reserve ratio, statutory liquidity ratio, repo and reverse repo, open market operations, security valuation, capital account convertibility, NPAs, NPA categories. Overview KYC & Anti Money Laundering lows in India. Banking Ombudsman. **(5+1)**

2. Overview of E-banking and history of e banking:
 Importance of E-banking: human involvement, and e-banking. Traditional Banking Vs E-Banking; technologies – personal computer banking, Telephone banking, branch networking. E-banking **technologies/ electronic delivery channels** – ATM,POS Machine, electronic cards, mobile phone banking, electronic transfer methods: IMPS, NEFT, RTGS, Payment banks, Mobile Banking, mobile valets, Payment Mobile Applications., Para Banking concept. Post office Bank. fishing attacks and how to be safe from fishing. **(5+1)**

3. Introduction to Merchant Banking:
Need of merchant banking services, difference between merchant and retail banking: Role and responsibilities of merchant banker Corporate consultancy, Project Counselling, Identification of potential investment opportunities, Capital structuring, negotiate with foreign collaborations, mergers and takeovers. Preparation of project feasibility reports, Portfolio Management, Loan/Credit Syndication, Arranging Working Capital Finance, Lease Finance, Corporate consultancy, Project Counselling, Identification of potential investment opportunities. The role of bank/s associated with International Trade process. Trade Transactions, Letter of Credit (LC), LC Process Flow & Bank Guarantees. **(5+1)**

4. Wealth Management:
Wealth management for high net worth individuals (HNWI), Goal-Based Planning Approach, a full range of tailored financial service offerings, Wealth management scope- Asset Management, Financial Planning (specific short term and long term goals), Tax Planning, Estate Planning, succession planning. Global trends in Wealth management services. Opportunities and challenges for technology in the wealth management services. Current state and future potential for wealth management, customer segment, consumer behaviour, wealth management service providers in India, regulatory environment competencies & skills of a wealth manager, ethics and transparency for wealth management professionals, Case study of wealth management **(5 +1)**

5. Marketing strategy & consumer behaviour:
Objectives of marketing financial products; marketing mix for financial services, marketing budget, lead generation, challenges, and opportunities in financial marketing, adapting to changing market environment.
Traditional marketing & Social media marketing- – Print media, TV, seminars, trade shows, Advantages & disadvantages speed-scale and reach of the digital platform, use of Facebook, Twitter, LinkedIn, company websites, financial services aggregator websites, email marketing, financial blogs. Chatbots, AI, machine learning, deep learning, Blockchain, future potential for growth for the marketing of financial services. Perception about risk & returns, knowledge about financial products, touch point for buying financial products, choice of distribution channel, customer journey of buying financial services.**(5+1)**

Suggested Text Books:
Security Analysis and Portfolio Management by Sudhindra Bhat, Excel Books, 2011 Edition

Suggested Reference Books:
1. Marketing Financial Services by Hooman Estelami, Dog Ear Publishing, LLC
2. The New Wealth Management: The Financial Advisor's Guide to Managing and Investing Client Assets
3. Harold Evensky, Stephen M. Horan, Thomas R. Robinson
4. Management of Banking and Financial Services (Third Edition) Padmalatha Suresh & Justin Paul (Pearson)

Suggested Swayam courses:
1. Services Marketing: Integrating People, Technology, Strategy
2. Services Marketing: A Practical Approach

Websites
1. **http://www.Rbi.org.in**: Report on Internet Banking.
2. **http://www.Ibef.org:** Banking Sector in India

Semester III	SE -IL -MKT- 11	**316 :Marketing Analytics**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316MKT.1	REMEMBERING	DEFINE various key concepts in Marketing Analytics
CO316MKT.2	UNDERSTANDING	DESCRIBE various key concepts in Marketing Analytics
CO316MKT.3	APPLYING	IDENTIFY what customers' value in a product/service, and assess what they are willing to pay for it.
CO316MKT.4	ANALYSING	EXPLAIN the use of various models and frameworks to solve marketing problems using marketing data
CO316MKT.5	EVALUATING	MEASURE the effectiveness of marketing effortsand key outcomes in multiple areas of Marketing.
CO316MKT.6	CREATING	DESIGN a study that incorporates the key tools and techniques of Marketing Analytics

1. Introduction to Marketing Analytics:
Business Decision making, Business Analytics; Marketing Analytics – Types, Nature(Descriptive, Prescriptive ,Predictive),Process of marketing Analytics, Marketing data, Understanding important metrics in Marketing, Analytics in various Marketing Applications (Scope),Introduction on Tools & Techniques used in Marketing Analytics, Summarizing Marketing data, Basic statistical concepts applicable e.g. Simple Linear Regression, Multiple Linear Regression and Conjoint Analysis **[4+1]**

2. Analytics on Forecasting and Pricing Analytics:
Forecasting- Correlation, Simple Regression and Multiple Regression to forecast sales, Modeling Trend and Seasonality, Ratio to Moving Average Method, Forecasting New Product sales -Using 'S'curves,Concepts-The Bass diffusion model, The Copernican principle to predict duration. **Pricing Analytics** - Optimization, Practical applications of price analytics, ROI concept, Consumer preference, choice, Conjoint Analysis, Logistic regression **[5+1]**

3. **Customer Profitability and Analytics on Sales & Distribution:**
Cluster Analysis, Collaborative Filtering, Classification Trees for Segmentation. Customer intelligence (CI)for predictive analytics, Customer Life Time Value (CLTV), How to calculate CLTV, Customer churn, Metrics for Customer Acquisition and Retention, Customer Equity, Customer Loyalty, Cohort analysis, Monte Carlo Simulation and Marketing Decision making.
Analytics on Sales & Distribution: Metrics for Sales, profitability**, Sales** Force Sizing, Effort (call planning), Territory Planning, Target Setting, Compensation Planning, Analytics based channel evaluation and selection **[6+1]**

4. **Analytics o nRetailing,**Topline and Bottomline Goals, Right Pricing, Point of Sales data, Market Basket Analysis Lift, RFMAnalysis, SCANPRO model, Allocating Retail Space and resources**. [4+1]**
5. Analytics on Promotion Web and Social Media Analytics:

Marketing Mix Models, Brand assets and Brand equity, Brand Funnel Analysis, Measuring effectiveness of advertisement, Media Selection Models, PPC and Online Advertising, Allocation of marketing budgets over multiple campaigns, Google Analytics, Measuring effectiveness of Social Media Advertising, Facebook and Twitter analytics, Viral Marketing and Text mining, Applying Text Mining in Real Life Scenarios, Google Analytics**[6+1]**

Reference Books:
1. Marketing Analytics by Wayne L. Winston, Publisher – John Wiley& Sons Inc.
2. Business Analytics by U. Dinesh kumar, Publisher – John Wiley& Sons
3. Data Mining Techniques in CRM byKonstantinos K. Tsiptsis, AntoniosChorianopoulos -Publisher – John Wiley& Sons.
4. Marketing Research by Dr. RajendraNargundkar, Publisher Tata McGraw Hill
5. Relationship Management- Text & Cases by S. Shajahan. Publisher T.M G.H

EBooks:
1. Marketing Analytics Roadmaps-Method, Metrics, and Tools by Jerry Rackley- Published-Apress
2. Marketing Analytics: Data-Driven Techniques with Microsoft Excel by Wayne L. Winston, Publisher- John Wiley & Sons, Inc.
3. Pricing, Online Marketing Behavior, and Analytics by GiampaoloViglia, Publisher- Palgrave Macmillan
4. Everything You Need To Know About Customer Lifetime Value (CLV) – DEMAC Media
5. Facebook Marketing for Dummies, Amy Porterfield, Phyllis Khare, Andrea Vahl. Publisher – John Wiley& Sons Inc.
6. Social Media Marketing by Dave Evans with Jake Mckee. Publisher – John Wiley& Sons Inc.

Semester III	SE -IL -MKT- 12	**317 : Marketing of High Technology Products**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO317.1	REMEMBERING	**DESCRIBE** the characteristics of High Technology Products and key concepts associated with Marketing of High-Tech Products.
CO317.2	UNDERSTANDING	**EXPLAIN** key concepts associated with Marketing of High-Tech Products.
CO317.3	APPLYING	**APPLY** marketing plans and decisions in specific situations in High-Tech Markets.
CO317.4	ANALYSING	**EXAMINE** the suitability of Marketing Mix Strategies/Plans in the light of marketing environment for high Tech products.
CO317.5	EVALUATING	**EVALUATE** alternative Marketing Mix Strategies/Plans forHigh-Tech Products.
CO317.6	CREATING	**DEVELOP** Marketing Mix Strategies/Plans for High-Tech Products.

1.Introduction to High Technology Marketing: Definition, Common Characteristics of High Technology, Continuum of Innovations - Radical/Breakthrough Innovations -Incremental Innovations - Implications of Different Types of Innovations -Contingency Model for High-Tech Marketing - Does Marketing Need to Be Different for High-Technology Products and Innovations? - Framework for Making High-Technology Marketing Decisions. **(5+1)**

2.Product and Branding decisions in High-Tech Markets: Market Orientation, R&D–Marketing Interaction, High-Tech Marketing Research Tools - Concept Testing - Conjoint Analysis - Customer VisitPrograms - Empathic Design - Lead Users - Quality Function Deployment - Prototype Testing - Beta Version Testing, Technology Development – The "What to Sell" Decision-Developing Services as Part of the High-Technology Product Strategy, Implications for High-Tech Marketing - Protection of Intellectual Property - Understanding Gray Markets –Piracy, and Restricted Exports - Managing Intellectual Property, Importance of Branding in High-Tech Markets, Developing a Strong Brand - Ingredient Branding. **(7+ 1)**

3.Pricing decisions High-Tech Markets: The High-Tech Pricing Environment, 3Cs of pricing cots, competition, customers, Consolidating 3Cs into a successful strategy, Customer oriented pricing, Pricing of After-Sales Service - The Technology Paradox- Solutions to the Technology (Pricing) Paradox - From Free to Fee. The Effect of the Internet on Pricing Decisions - Additional Pricing Considerations - Outright Sale of Know-How versus Licensing Agreements - Licensing Restrictions - Pay-Per-Use versus Subscription Pricing - Price Bundling – Leasing.**(5 + 1)**

4.Place decisions in High-Tech Markets: Channel Considerations in High-Tech Markets –Managing Hybrid channels, Emerging considerations in Distribution Channels, Gray market, Black market , Matching Supply Chain strategy to uncertainty, Management supply chain management technology, outsourcing –Greening of Supply chain, Need for Indirect Channels to Provide Value for Manufacturers - Evolution of High-Tech Channels. **(4 + 1)**

5. Promotion decisions in High-Tech Markets: Promotion Mix Decisions – Use of Personal Selling, Direct Marketing and other promotion tools; New-Product Pre-announcements - Objectives of Pre-announcements, Advantages and Disadvantages of Pre-announcements, Tactical Considerations in Pre-announcement Decision; Importance and use of Customer Relationship Management (CRM). **(4 + 1)**

Suggested Text Books:
1 Marketing of High-Technology Products and Innovations by Jakki Mohr, Sanjit Sengupta, Stanley Slater, 2nd Edition

Suggested Reference Books:
1.Marketing High Technology by William H. Davidow
2.Product Marketing for Technology Companies by Mark Butje

Supplementary Reading Material:
1.Crossing the chasm: Marketing and Selling High Tech Products to Mainstream
2.Customers by Geoffrey Moore
3.Product Strategy for High Technology Companies by Michael E. McGrath.
4.Next Generation Product Development: How to Increase Productivity, Cut Costs, and Reduce Cycle Times by Michael E. McGrath
5.The Innovator's Dilemma by Clayton M. Christensen

Websites
1. http://marketinghightech.net/
2. https://hbr.org/1999/07/what-high-tech-managers-need-to-know-about-brands , accessed on 27th April 2020.
3. https://www.brandingstrategyinsider.com/brand-building-in-a-hi-tech-world/#.Xqa7c25uJPY,accessed on 27th April 2020.
4. https://quality-one.com/qfd/ ,accessed on 27th April 2020
5. https://www.semanticscholar.org/paper/A-CONTINGENCY-THEORY-APPROACH-TO-MARKET-ORIENTATION-Heiens-Pleshko/510606add0c3c588de0f0c0f9eb5c4f7ac1e576a

Subject Core (SC) Courses - Semester IV
Specialization: Marketing Management

Semester IV	SC – MKT- 05	**403 MKT: Marketing 4.0**
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO403MKT.1	REMEMBERING	DESCRIBE the various concepts associated with Marketing 4.0
CO403MKT.2	UNDERSTANDING	EXPLAIN the importance of 5A's in Marketing 4.0.
CO403MKT.3	APPLYING	DEMONSTRATE the application of concepts of digital marketing, new productivity metrics, Human centric marketing, Omni channel marketing to the real world of digital economy
CO403MKT.4	ANALYSING	DISTINGUISH between traditional and digital marketing practices in given real world context to be the effective marketers.
CO403MKT.5	EVALUATING	ASSESS how Technology & connectivity has changed human life and business in the context of real-world commodities, products & services.
CO403MKT.6	CREATING	DEVELOP strategies to create WOW! Moments with customer engagement

1. Introduction to Marketing 4.0
Power Shifts to the Connected Customers, Shift from Exclusive to Inclusive, social communities, Reverse innovation, Frugality change in focus From Vertical to Horizontal, Transition from Individual to Social approach, Online go-to-market option-factor (friends, families, Facebook, Fans, twitter followers)
The Paradoxes of Marketing to Connected Customers
Breaking the Myths of Connectivity -connectivity as a game changer, lowering entry barriers, disruption, collaboration, co creation, Informed customers vs Distracted customers, brand conversion, Negative Advocacy vs Positive Advocacy, prompted Advocacy
The Influential Digital Subcultures
Youth: Acquiring the Mind Share, Fast changing Pop culture, Youth as a primary market, early adopters,
Women: Growing the Market Share, Women's role in decision-making, Researched decision process, Women's role as a gatekeeper, Netizens: Expanding the Heart Share, well informed, smart and High influence of Netizens. **[8+2]**
2. Marketing 4.0 in the Digital Economy
Moving from Traditional to Digital Marketing, Integrating Traditional and Digital Marketing, technologies that drive digital economy, digitally empowered entrants, combining online and offline interaction, Blending style with substance, The New Customer Path
Brand clarification of characters and codes-Brand positioning, consistency in Brand characters, Brand differentiation based on Human-to Human touch, Four Ps to 4Cs, Commercializing 4C's
Understanding How People Buy: From Four A's to Five A's, Aware, Appeal, Ask, Act, and Advocate. Driving from Awareness to Advocacy: The O Zone (O3) [**7+ 2**]
3. Marketing Productivity Metrics
Introducing PAR and BAR, Decomposing PAR and BAR
Driving Up Productivity, Purchase Action Ratio and Brand Advocacy Ratio
Industry Archetypes and Best Practices
Four Major Industry Archetypes, Four Marketing Best Practices. **[7+2]**
4. Human-Centric Marketing for Brand Attraction
Understanding Humans Using Digital Anthropology, Building the Six Attributes of Human-Centric Brands, When Brands Become Humans
Content Marketing for Brand Curiosity
Content Is the New Ad, #Hashtag Is the New Tagline, Step-by-Step Content Marketing, Creating Conversations with Content **[6+2]**
5. Omni channel Marketing for Brand Commitment

The Rise of Omnichannel Marketing. Step-by-Step Omni channel Marketing, Integrating the Best of Online and Offline Channels

Engagement Marketing for Brand Affinity

Enhancing Digital Experiences with Mobile Apps, Providing Solutions with Social CRM, Driving Desired Behavior with Gamification. Mobile Apps, Social CRM, and Gamification, Epilogue: Getting to WOW! What Is a "WOW"? Enjoy, Experience, Engage. **[7+2]**

Suggested Text Books:

1.Marketing 4.0 by Philip Kotler, HermawanKartajaya, and IwanSetiawan,John Wiley & Sons

2.. Managing Content Marketing: -The Real WorldGuide for creating Passionate subscribers to Your Brand-JiePulizzi, ,RoibertRose,CMI Books

3.Engagement Marketing: -How small business wins in a socially connected world, By Gail Goodman, Wiley Publishers

4.Marketing Metrics: -The Manger's Guide to Measuring Marketing Performance -Neil T Bendle, Paul Farris and Philip Pfeifer,Pearson FT Press. Third edition

Suggested Reference Books

1.The Art of Digital Marketing: The definitive guide to creating strategic, Targeted and Measurable online campaigns-Ian Dodson

2.Permission Marketing, turning strangers into friends and friends into customers by Seth Godin,

3. Collaboration and Co-creation-New platforms for marketing and innovation-Bhalla, Gurav

4.Customer Relationship Management: -Concepts and technologies-FancisButle,Routledge Taylor and Francis Group, London and New York

Online Journals and Websites
1. https://www.youtube.com/watch?v=oSAHzJGiNCM accessed on 27th April 2020
2. https://www.youtube.com/watch?v=utDJMk9kf64 ,Marketing 4.0 in the Digital Economy, accessed on 27th April 2020
3. .https://www.youtube.com/watch?v=gyk83sdL8mw accessed on 27th April 2020
4. https://www.youtube.com/watch?v=mMKDzADelb0,Marketing And Industry 4.0: Digital Infrastructure, accessed on 27th April 2020
5. https://www.marketingjournal.org/marketing-4-0-when-online-meets-offline-style-meets-substance-and-machine-to-machine-meets-human-to-human-philip-kotler-hermawan-kartajaya-iwan-setiawan/ accessed on 27th April 2020
6. https://www.researchgate.net/publication/261431780_Marketing_40_A_New_Value_Added_to_the_Marketing_through_the_Internet_of_Things accessed on 27th April 2020
7. https://minutehack.com/opinions/marketing-4-0-reaching-connected-customers accessed on 27th April 2020
8. https://www.adweek.com/brand-marketing/how-to-make-your-brand-design-flourish-with-a-human-touch/ ,accessed on 27th April 2020
9. https://hbr.org/2015/07/engineering-reverse-innovations , accessed on 27th April 2020
10. https://iveybusinessjournal.com/publication/reverse-innovation-and-the-emerging-market-growth-imperative/ , accessed on 27th April 2020

Semester IV	SC – MKT- 06	**404 MKT: Marketing Strategy**
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404MKT.1	REMEMBERING	DISCOVER perspectives of market strategy.
CO404MKT.2	UNDERSTANDING	UNDERSTAND the intricacies of competitive marketing situations and ways to handle each situation.
CO404MKT.3	APPLYING	BUILD a market strategy through integrating concepts like product life cycle, adoption, and segmentation, branding, pricing, distribution, and market communication.

CO404MKT.4	ANALYSING	ANALYSE a company's current situation through applying internal and external analyses.
CO404MKT.5	EVALUATING	EXPLAIN alternative ways to measure the outcome of market strategies.
CO404MKT.6	CREATING	CREATE Corporate Advantage by exploring how the scope of firms is influenced by resources that are shared across products.

1. **Basics of Marketing Strategy:**
   Introduction to Marketing Strategy & tactics, Components & Hierarchy, Integrating marketing strategy with the firm's other strategies & resources,
   Discovering Market Opportunities:
   Marketing Strategy - Market Opportunity Analysis, Process of Identification, Formulation, Implementation & Control, Marketing Plan - Blueprint, Marketing Audit **[7+2]**
2. Measuring Market Opportunities:
   Market Forecasting: Introduction, Purpose, Techniques Forecasting Based on Current Demand: Market build up method, chain ratios, market factor index method
   Forecasting Based on Past Demand: Time series analysis, Trend analysis, Leading indicators
   Forecasting through Experimentation: Concept testing, Test marketing
   Forecasting through Intentions & Expert Opinion: Buyers intentions, sales force opinion, trade opinion, expert opinion, Delphi method, Bootstrapping, Cross impact analysis
   Market Knowledge Systems:
   Marketing Intelligence, Marketing Databases, Marketing Data Touch Points-Significance & Application **[7+2]**
3. **Targeting Attractive Market Segments & Positioning:**
   Choosing Attractive Market Segments – Segment synergies, Segment invasion strategy, Factors influencing choice of Targeting, A five step process
   Different Targeting Strategies: Mass market, niche market, growth market, Differentiation Based on Product, Image, Channel, Personnel & Services
   Positioning Process: Identifying relevant competitors, identifying determinant attributes, collecting information on perceptions of products **[7+2]**
4. **Marketing Strategies for New Economy:**
   Market Specific Strategies: Strategies for New Entrants, Strategies for Growth Market, Strategies for Mature Market, Strategies for Declining Market,
   Organisational Specific Marketing Strategies: Marketing Strategies for Leaders, Challengers, Followers, Niche Competitive Strategies:
   Introduction to Competitive Edge, USP, Integration, Focus, Differentiation, Retrenchment strategies **[7+2]**
5. Marketing Metrics for Marketing Performance:
   Gap Identification & Bridging Tools: Strategic Gap Planning Model, BCG Matrix,Family Portfolio matrix, Porter's Five Forces, Ansoff Matrix,Market profitability analysis
   Designing Marketing Metrics - Process:
   Setting Standards of Performance, Specifying & Obtaining Feedback Data, Evaluating Feedback Data, Taking Corrective Actions, Organizational issues.Strategic wear-out**[7+2]**
   (Note: Relevant Cases to be discussed for the above Units)

Suggested Text books
1. Strategic Marketing by A. Nag, Macmillan Publication
2. Marketing Strategy by Walker, Mullins, Boyd &Larreche, McGraw-Hill/Irwin
3. Marketing Strategy and Competitive Positioning by Graham Hooley, Brigitte Nicoulaud, Nigel F. Piercy, Pearson Education, 5th Edition.
4. Strategic Marketing Management-Richard Wilson & Colin Gilligan, Routledge
5. Strategic Marketing: An Introduction by Tony Proctor
Suggested Reference Books
1. Strategic Marketing David.W.Cravens, Nigel.F.Piercy, Tata MacGraw Hill Publication
2. Marketing Strategy: A Decision-Focused Approach-John W. Mullins, By Felix Mavondo, John Gountas, Orville C. Walker; McGraw-Hill Education; 2nd Revised Edition
3. Strategic Marketing Text & Cases- S. Shajahan, Viva Books
4. Strategic Management & Marketing by Narendra Singh, Himalaya Publication

5 Strategic Marketing Management -Text &Casesby UC Mathur, Macmillan

Supplementary Reading Material

1. Marketing Warfare: 20th Anniversary Edition By Al Ries, Jack Trout, (McGraw-Hill Education; 2nd edition)

2. Marketing Strategy a Complete Guide - 2019 Edition by GerardusBlokdyk, 5starcooks

3. Blue Ocean strategy-W Chan Kim and Renee A Mauborgne

Websites

Business Strategy-Business Standards

Brand Equity-Economic Times

Audio Visuals link

https://www.youtube.com/watch?v=Fy1pcW9mvNo

https://www.youtube.com/watch?v=RCHofmkLgzs

https://www.youtube.com/watch?v=jF_MDRMFcPs

https://www.youtube.com/watch?v=cZom3AAOsgs

Subject Elective (SE) Courses - Semester IV
Specialization: Marketing Management

Semester IV	(SE – IL - MKT- 13)	**409 MKT-Customer Relationship Management**
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 409MKT.1	REMEMBERING	DEFINE and DESCRIBE basic concepts and theories related to CRM.
CO 409MKT.2	UNDERSTANDING	UNDERSTAND and EXPLAIN key concepts and theories associated with CRM.
CO 409MKT.3	APPLYING	APPLY and ILLUSTRATE principles, theories and models of CRM in B2B and B2C markets.
CO 409MKT.4	ANALYZING	CLASSIFY Customer acquisition and retention strategies and ANALYZE Customer database in CRM.
CO 409MKT.5	EVALUATING	EVALUATE suitability and effectiveness of CRM strategies in specific marketing situation.
CO 409MKT.6	CREATING	DEVELOP CRM strategies/plans for various B2B and B2C markets.

1- Introduction of CRM and its Fundamentals:
1.1 Concept and Context of Relationship Management: Internal and External relationship management, Need and Importance of relation with customers and other stakeholders, Approach towards Marketing: A Paradigm Shift- Transition from Product focus to Customer focus, Transactional Vs Relationship Marketing, Linkage between customer satisfaction- Customer Loyalty and business performance, Relationship Management Theories, Building Brands through Relationship Marketing, Service Level Agreements.
1.2 Defining CRM, Levels of CRM,CRM as a strategic marketing tool, CRM significance to the stakeholders, Strategic CRM, Operational CRM, Analytical CRM, Collaborative CRM, and Models of CRM. **(6+1)**

2 - Customer Acquisition and Retention:
2.1 Acquisition of new customer, understanding customer value, sources of customer value, Values from products, services, people, physical evidence, customer communication, Channels etc., customer value estimates, KPI of a customer acquisition program, Customer Touch Points, Customer Equity.
2.2 Concept of Customer retention. Role of CRM in Customer in retention, Economics of customer retention, Managing customer retention or value retention? Strategies of customer retention, KPI of customer retention program, Terminating customer relationship and its strategies, Concept and Significance of Customer Loyalty, Customer Life Cycle and Customer Life Time Value (CLTV), Recency, Frequency and Monetary Value (RFM) Analysis, Customer Loyalty Ladder, Impact Of Customer Defections, Types of Defectors, Strategies to reduce customer defections, CRM Framework- Switching. **(6+1)**

3 - CRM Mechanics:
3.1 Maintaining customer database, Desirable database attributes, Data marts, Data warehousing, Data integration, Data mining and Privacy issues.
3.2 Customer Portfolio Management-Concept and basic disciplines, Market segmentation-sales forecasting and CPM, CPM in B2B, Seven core customers' management strategies.
3.3 CRM and Customer Experience Management: Concept of Customer experience, experiential marketing strategies and Tactics, Customer experience and Role of CRM. **(4+1)**

4: - Overview of CRM in B2C and B2B Market:
4.1 Service business characteristics and classification, Service recovery, CRM in Banking Industry, Hospitality Industry, Aviation Industry, Telecom and Retail industry.
4.2 CRM in Consumer durable Industry and its application. - White Goods, common CRM Tools in Practice and improvisation for Quality Service Assurance.
4.3 Importance of CRM in B2B markets, Key Account Management, Supply channel Management, Internal CRM and Employee relationship management, **(4+1)**

5 - Implementation of CRM and Future Trends in CRM:

5.1 CRM Implementation Process, Evaluation of CRM process, Challenges in CRM implementation, Customer Care Management through Information Technology Tools – Electronic Point of Sales (ePOS) , Sales Force Automation

5.2 Emerging trends in CRM, Social CRM, e-CRM, Challenges involved in formulating and implementing e-CRM strategies, Multichannel CRM, Role of Social media in CRM, Six E's of e-CRM,, Mobile CRM, Artificial Intelligence (AI) with CRM System. **(5+1)**

Suggested Text Books:-

1. Customer Relationship Management – Concepts and Technologies by Francis Buttle, 2nd Edition, Butterworth Heinemann, Elsevier
2. Relationship Management – Text and Cases, S. Shajahan, TMGH.
3. J N Sheth, AtulParvatiyar, G. Shainesh, 2001, Customer Relationship Management, Tata McGraw Hill
4. Customer Relationship Management: Concepts and Cases, Second Edition, Alok Kumar Rai PHI learning Pvt Ltd, New Delhi

Suggested Reference Books:-

1. Handbook of Relationship Marketing by JagdishSheth and AtulParvatiyar, Response Books, Sage Publications.
2. Zikmund, McLEOD, Gilbert, Customer Relationship Management
3. Customer Relationship Management- Concepts and Technology, Second Edition, Francis Buttle, Elsevier, Sabre foundation
4. Brown, Stanley A 2001, Customer Relationship Management, John Wiley& Sons
5. Anderson, Kristin , 2002, Customer Relationship Management, Tata McGraw-Hill

Suggested URL:

1. https://swayam.gov.in/nd2_imb20_mg09/

Semester IV	(SE-IL-MKT-14)	410MKT: Rural and Agriculture Marketing
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO410MKT.1	REMEMBERING	DEFINE various concepts related to Rural and Agricultural Marketing
CO410MKT.2	UNDERSTANDING	UNDERSTAND the rural consumer buying Behaviour, Rural Marketing Mix, COMPARE Rural and Urban market on different terms, Environment, and Consumer, Industrial and Agriculture Market.
CO410MKT.3	APPLYING	APPLY knowledge and skills of Rural Marketing to design marketing Mix strategies.
CO410MKT.4	ANALYSING	ILLUSTRATE the Rural product, Pricing and Distribution Strategies with modern approach and challenges faced in rural Market and emerging Models in Rural Market.
CO410MKT.5	EVALUATING	EVALUATE the use of ICT in Agriculture Marketing with use of various models in domestic and international Market.
CO410MKT.6	CREATING	BUILD a model for Marketing of Agricultural products by using marketing mix tools

1. Rural Marketing: Introduction, Defining rural markets & rural marketing, rural vs. urban markets, Rural Marketing Environment – PEST analysis, Rural Economic Structure, Rural Occupation Pattern, Incomes & Consumption, Rural market Size, Rural Infrastructure **(4+1)**

2. Rural Consumer Behaviour& Marketing Research: Characteristics of Rural Consumers, Role of Opinion Leaders, Diffusion of Innovation in Rural Markets, Sources & Type of Secondary Data on Rural markets, Collecting Primary Data in Rural Setting, Segmentation**,** Targeting & Positioning: Bases of Segmenting Rural Markets, Target Marketing, Coverage of Markets, Positioning in Rural Markets, Rural consumer Buying Process **(6+1)**

3. **Rural Product, Pricing and Distribution**: Rural Product Categories, Branding in Rural Markets, Problem of Fake Brands**, Pricing Strategy** – special considerations in rural markets ,Credit in rural markets – need, sources & innovative credit delivery systems ,Modern supply chain management approach, Challenges of distribution in Rural markets, Rural Retail System – last mile problem, public distribution system, cooperatives, **Emerging Models in Rural Markets**: Rythu Bazars (Farmers' Markets), Project Shakti, ApniMandi**(6+1)**

4. Introduction to Agricultural Marketing: Definition of Market and agricultural marketing, Understanding Agricultural Markets, Nature & scope, Objectives of Agriculture Marketing, Organizations and functions of agricultural marketing in India. Difference between consumer, industrial and agricultural markets **(4+1)**

5. ICT in Agricultural Marketing: Information and Communication Technology (ICT) tools used in Agricultural Marketing, Market research-Market information service - electronic auctions (e-bay), AGMARKNET, e-Chaupals, Agrimarket, e-NAM, m-krishi, and Domestic and Export market Intelligence Cell (DEMIC) – Market extension, ICT initiatives of NGOs. Role of social media in agricultural marketing. Successful case studies**. (5+1)**

Suggested Text Books:
1. The Rural Marketing Book by PradeepKashyap& Siddhartha Raut
2. A New Approach to Rural Marketing by KaushikSircar
3. Marketing of Agricultural Products by Richard Louis Kohls, Joseph N. Uhl, Person Publication, 9thEdition.
4. Agriculture Marketing in India by S. S. Acharya& N.L. Agarwal , Oxford & IBH Publishing Co. Pvt. Ltd New Delhi, 4thEdition
5. Rural Agriculture & Marketing by S.B. Verma, S.K. Jiloka&Mandal, Deep & Deep Publication Pvt. Ltd.

Suggested Reference Books
1. Rural Marketing – Concepts & Practices by BalramDogra, KarminderGhuman
2. New Perspective in Rural & Agricultural Marketing by Ramkishen Y., Jaico Publishing House , 2ndEdition
3. Introduction to Agribusiness Marketing by George Seperich, Michael Woolverton, James Beierlein, Pearson Education.
   New Perspective in Rural & Agricultural Marketing by Ramkishen Y., Jaico Publishing House , 2ndEdition.

Semester IV	(SE-IL-MKT-15)	411 MKT: Tourism & Hospitality Marketing
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 411 MKT.1	REMEMBERING	DEFINE core Concepts of Tourism and Hospitality industry and IDENTIFY various hospitality and tourism considerations
CO411 MKT.2	UNDERSTANDING	DISCUSS and EXPLAIN various aspects of Tourism and Hospitality Marketing and EXEMPLIFY the various related terms.
CO411 MKT.3	APPLYING	ORGANIZE and APPLY related numerical, pictorial and graphical data and MAKE USE OF them into business information
CO411 MKT.4	ANALYSING	ANALYSE important components of Service quality in Hospitality and Tourism industry and INTEGRATE them for appropriate service delivery through practical applications in the hospitality and tourism industry.
CO411 MKT.5	EVALUATING	CREATE Appropriate segmenting, targeting and positioning strategies and DESIGN marketing mix for hospitality and tourism industry.
CO411 MKT.6	CREATING	FORMULATE overall functioning in hospitality and tourism industry and PROPOSE a blend of legal and customer based strategies to meet customer relationship marketing and face the challenges.

1. **Introduction to Tourism and Hospitality Industry: Introduction to Tourism Industry:** Concept, definition, types and characteristics, Types of Tourists – Components of Tourism Infrastructure – Elements and Characteristics of Tourism Products- Scope of Tourism – Motivation for Tourism- Employment Opportunities in Tourism **Introduction to Hospitality Industry:** Concept– Origin and Growth – definition, types and characteristics, Types of hospitality products – Elements and Characteristics of hospitality Products, Components of Hospitality Infrastructure – Industries related to Hospitality, – Employment Opportunities in Hospitality **Relation of hospitality industry with Tourism:** Factors Affecting Hospitality and Tourism Industry, Customer Based Metrics, Product-Market Based Metrics, Marketing Mix Metrics **(4+1)**

2. **Marketing Mix: Tourism:** Types of tourism- Entertainment, Medical-Eco-Pilgrimage- Agri-Cultural-Sports-Leisure-Theme based, Destination Tourism. Domestic & International Tourism, Packages and Travel bookings, Tour Packaging &

Costing - Importance of Tour Packaging – Classifications of Tour Packages -Components of Package Tours - Components of tour cost, Subsidies, Bookings, Citizen wise allowances, Tour agents and operators, cruise line traveling, Airline Tickets , Promotion through celebrity endorsements, events, Specialty features, **Hospitality:** Star Ratings of Hotels – Global Standards for Hotels, ownership structure: Sole Proprietorship, partnership, Franchisees, Restaurants- types, Tariffs and Discounts, Mode of booking- Personal, Telephonic, Online App based, Promoting season wise, festival wise, feature and facility wise, Off season promotion. **Role of integrated marketing communication in hospitality and tourism:** analyzing the effectiveness of different communication platforms, and examining the fast-changing landscape in digital marketing. **Service Characteristics of Hospitality and Tourism Marketing**: The service culture, Extended 3Ps of Marketing for services, Characteristics of Service Marketing 4 Is – Intangibility, Inseparability, Inconsistency, Inventory **(5+1)**

3.   **Segmentation, Targeting and Positioning of Tourism and Hospitality Industry: Segmentation:** Types of tourists-Personal, Business, Professional, differently-abled tourist- **Targeting and Positioning:** Understanding the marketplace and customer needs, wants and demands; Tangible Products (pick, drop facility, tour guide) **Hospitality segmentation:** Classification of Hotels – Major Departments of a Hotel – lodging, F&B, recreation, event planning, theme parks, transportation, and additional facilities like internet, gym- **Targeting and Positioning:** Locations, Sections and Layout– Room/ table booking availability- Room tariffs and calculation of rates - reservation – registration – Guest services – Check out and settlement – Front office experiences, Room service differentiation, – safety and security. Evaluating and publicizing Hotel performance – Evaluation of hotels by guests - Direct marketing techniques through various apps, Understanding organizational customers and success factors of marketing Meeting, Incentive, Conference, and Exhibition (MICE) business. **(6+1)**

4.   **Customer Relationship Management CRM in Tourism and Hospitality Marketing:** Benchmarking –Outsourcing - Value addition- Service Quality Control **Tourism Destination Planning:** Environmental Analysis- Resource Analysis - Cultural Analysis **Understanding brand development:** Referrals- Managing service Differentiation, Briefing, Banquets, Conference & Convention Management -Planning for Sustainable Tourism, Formulating Policy to Deal with Crises , Contingency Planning, Reviewing the relationship between service quality and human resources, Role of E- commerce in Hospitality sector - Best practices for building customer loyalty and creating a strong brand **(5+1)**

5.   **Legal Aspects and Future Trends in Hospitality and Tourism: Legal Aspects:** Recognition of Travel Agency, Tour Operator and Travel Guide License & Permits and Certifications required for Hotels, Awareness about existence of National & International Organization like IATA, PATA, ICAO, WTO, UFTAA, FHRAI, Government regulations and role of various certifications in Food Quality and Food Safety support- Travel and Health Insurance, Forex, Cargo & MICE – Documentation. **Prospects, Changing trends, issue and challenges and Future Growth in Tourism:** Space tourism, Adventure Tourism, Eco Tourism- Eco-tel and Eco resorts, Forces Impacting the future of Tourism –Pollution, Economic, Branding, Terrorism, Conflicts between countries, Technology; Tourist characteristics – Knowledge-Based Society and workforce, Changing Nature of Tourism Products. Future trends of market segmentation analysis in tourism industry **(5+1)**

Suggested Text Books:
1. Tourism Development: Principles and Practices: A.K. Bhatia
2. Hotel Facility Planning: BansalTarun
3. Hotel Housekeeping: Operations and Management: G. Raghubalan, Smritee Raghu balan
4. Hotel Front Office: Operations: J R Tewari
5. Tourism Operations and Management: RodaySunetra; Vandana Joshi; BiwalArchana
6. Marketing for Hospitality & Tourism - Philip Kotler, Bowen &Makens Prentice Hall Inc.
7. Marketing Management for the Hospitality Industry: A Strategic Approach: Allen Z. Reich Wiley,
8. Strategic Management for Hospitality and Tourism (1st ed.): Okumus, F., Altinay L., &Chathoth P. Butterworth-Heinemann.
9. Tourism Marketing: S.M. Jha, Himalaya Publishing House
10. Tourism Management: Anil Sharma, Essential Books, New Delhi
11. Tourism and Travel Management: BiswanathGhosh, Vikas Publishing House Pvt. Ltd. New Delhi
12. Basic of Tourism Management: Suddhendu Mishra, Excel Books, New Delhi

Suggested Reference Books
1. Hospitality Strategic Management: Concepts and Cases: Cathy A. Enz, Wiley.
2. Strategic Management for Travel and Tourism: David F. J. Campbell, George Stonehouse, and Nigel Evans
3. Cross-Cultural Management Essential Concepts Fourth Edition: David C. Thomas, Mark F. Peterson

4. Promoting Tourism and Hospitality: Trends and Opportunities: Arvind K. Singh & R. A. Sharma

5. Tourism Management: Stephen J Page, Butterworth-Hienemann Oxford

6. Tourism Marketing: Tapan K Panda and Sitikantha Mishra, The ICFAI University Press, Hyderabad

7. Marketing Whitebook of current year

Swayam resource:

1. TS-1: Foundation Course in Tourism By Dr. Sonia Sharma & Dr. TangjakhombiAkoijam, Indira Gandhi National Open University

2. TS-2: Tourism Development Products, Operations and Case Studies

Online references (websites):

1. www.tourism.gov.in
2. www.agritourism.in
3. www.agrotourismworld.com

Semester IV	(SE-IL-MKT-16)	412 MKT – Retail Marketing
2 Credits	LTP - 1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 412 MKT.1	REMEMBERING	DEFINE various concepts associated with retail marketing
CO412 MKT.2	UNDERSTANDING	EXPLAIN the terms and concepts used in Retail Marketing
CO412 MKT.3	APPLYING	ILLUSTRATE value creation & competitive advantage in Retail Marketing.
CO412 MKT.4	ANALYSING	ANALYSE the contemporary issues affecting Retail marketing decisions
CO412 MKT.5	EVALUATING	EVALUATE the effectiveness of Retail marketing mix used by different Retail formats
CO412 MKT.6	CREATING	FORMULATE effective retail marketing strategy

1   **Introduction to Retailing:** Meaning, Nature and Scope of Retailing, Evolution of Retailing,Global and Indian Scenario in retailing, Drivers of Retail change in India, Opportunities and Challenges in Retailing in India, Major Players nationally and internationally Importance and Functions of Retailing, Classification of Retailing, Product Retailing vs. Service Retailing, Retail Management Decision Process, Retail Marketing Environment, Dealing with ethical issues, Social Responsibility, Environmental Orientation, Waste Reduction at Retail Stores. **(4+1)**

2   **Retail Marketing Strategies:** Definition, scope, Importance of Market Segmentation in Retailing, Targeted Marketing Efforts, Criteria for Effective Segmentation, Dimensions and Differentiation Strategies, Limitations of Market Segmentation. Retail Planning Process, Retail Models, Retail "EST" model. Formats of Retailing: Super markets, Hyper Markets, Departmental stores, Convenience store. Retail Institutions categorized by ownership: Independent, franchising, leased, vertical marketing system; Non- store Retailing.
Store Location -Introduction, Types of Retail Stores Location, Factors Affecting Retail Location Decisions, Location & Site Evaluation, Site Selection. Store design and Retailing mix, store layout , circulation plan, Floor Space management Retail Merchandising, Understanding Merchandising Management, Activities of a Merchandiser. Planogram, Visual Merchandising **(7+1)**

3   **Retail Administration and Planning:** Introduction, Retail Store Management, Supply Chain Management, Human Resource Management, Information System Management, Category management, Assortment planning, Analyzing merchandise performance, Gross Margin Return on Inventory Management (GMROI), Inventory Turnover Ratio, Sales Forecasting. Product Mix Trends Mall Management. **(4+1)**

4   **Retail Marketing Communication and Pricing:** Introduction, Role of Communication in Retailing, Elements and Marketing Communication Tools, Retail Marketing Communication Process, Retail Marketing Communication Plan, Implementing and Evaluating the Retail Communication Programs. Retail Pricing- Introduction, Factors Influencing Retail Pricing, Setting the Retail Price, Pricing Objectives, Pricing strategies, Pricing Methods, Price Adjustment and Discrimination. **(5+1)**

5   **Customer Relationship Management and Recent Trend in Retiling:** Introduction, Benefits of Relationship Marketing, Principles of CRM, Customer Relationship Management Strategies, Components of CRM, Customer Service in Retailing, CRM and Loyalty Program, Role of Technology in Retail Marketing, Applications of IT in Retailing, Data Warehousing and Data Mining, Use of Barcodes, RFID tags and electronic shelf tagging, E-Tailing, Future Trends in Retailing with respect to use of technology in retail marketing. **(5+1)**

Text Book
1. Retailing Management by SwapnaPradhan, TMGH Publication
2. Retail Marketing Management by David Gilbert, Pearson Publication
3. Retail Business Management by R. Perumalsamy, Anmol Publications
4. Retailing Management by Arif Sheikh, Himalaya Publication
5. Retail Management by Gibson, Pearson Publication

Ref Book
Retail Marketing Management by David Gilbert, Pearson Publication
1. Information Technology for retailing by Khurana, McGraw Hill Publication
2. Retail Management by Michael Levy and Barton. A Weitz, Mcgraw Hill Publicatio
3. Retail Management: A Strategic Approach by Barry Berman and Joel Evans, Prentice Hall College publication

Websites
1. http://www.indiaretailing.com

MOOC Courses:
2. Introduction to Retail Management – IIMB (Swayam)
3. Retail Management – CEC (Swayam)

Semester IV	(SE-IL-MKT-17)	413 MKT: Retailing Analytics
2 Credits	LTP:1:1:1	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 413 MKT.1	REMEMBERING	ENUMERATE the characteristics, opportunities and challenges of New Age Retailing, Digital Consumers Dynamics, List the data required for retail analytics.
CO 413 MKT.2	UNDERSTANDING	UNDERSTAND Consumer Buying Behavior and Trends in new age retailing.
CO 413 MKT.3	APPLYING	USE various kinds of data and tools for performing Retailing Analytics.
CO 413 MKT.4	ANALYSING	ILLUSTRATE the use of various tools and frameworks for predictive retail Analytics.
CO 413 MKT.5	EVALUATING	DERIVE a variety of metrics and quantify key outcomes in multiple areas of Retail.
CO 413 MKT.6	CREATING	BUILD value for Retail and Marketing by deriving Marketing ROI metrics..

1. **Introduction to retailing**- Types of Retailers, store-non store retailers, organized v/s non-organized retailers. The new retail environment and Marketing decisions, Retailing in the Digital Era :New Age Retailing, Retailers goodwill, Digital Consumers Characteristics— Interconnected, Involved, Co-creation, Collaboration, Customer Data — Big Data. Data Characteristics-Variety, Volume, Velocity, Reliability **(5+1)**
2. **Retailing Analytics and Data Analytics:** Customer Insights, Critical issues in Modern day Retail, The Digital organization, Retail analytics for decision making, Informed and Risk Aware Decisions, Benefits of Retail

Analytics—Informed Decisions, Risk mitigation, Gaining visibility, Retail Analytics for Strategic—Tactical and Operational decisions. Data Terms, Market Basket, Data Storage, Data without Use Is 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 **(5+1)**

3. Marketing in a Consumer-Driven Era: Understanding Consumer Buying Behavior and Trends , Leveraging customer data, Putting information in context, Clicking with consumer communities, Keeping content in mind, From personalization to commerce, Key Questions: What they are buying, Who they are, How they are buying, Where else they are buying?**(4+1)**

4. **Data sources and Data Processing:** Customer, Retailer, Supplier, Market, Web, Mobile, Social, Call Centers, Data Mining and Data Storage, Structured V/s unstructured data, The unstructured data challenge, Recognizing the untapped analytics opportunity, Customer-Driven Decision Making, Content Analytics in Action, Understanding Affinities between Products and Customers, Advanced affinity analysis ,Market basket analysis, Understanding customer preferences, Anticipating the customer's next move, Improving Retail Promotions.(5+1)

5. Aspects **of Retailing Analytics: Marketing Analytics:** Marketing Mix ROI, Promotions, Promotional maturity curves, pricing, pricing per segment, Margin , Profitability, Personalization, Campaigns, Marketing Return Curves, Scenario Analysis, P&L analyses, Managing Incentive Compensation. Merchandising Analytics: Assortment planning, Geospatial Analytics, Product placement, Space Optimization, Product adjacency, aligning store-level assortment with demand, Category Intelligence, Developing dynamic retail assortments, Prioritization of Product categories, Store operations analytics : Using Analytics to Optimize Staffing Plans, Drilling into HR analytics, Customer Traffic, Store Performance Dashboards, Local Market Analytics, Online Offline Analytics, Sales Trends, Brand Performance, Account Performance Forecasts. Supply Chain Analytics: Creating a Demand-Driven Supply Chain, Gaining Visibility across the Supply Chain, Resolving Operations Problems Preventatively, Inventory, Supplier performance, Demand forecasting, Vendor Intelligence, Vendor Rankings, Fulfillment Intelligence, Inventory Diagnostics, Shrinkage, Optimization opportunities**.(6+1)**

Suggested Text Books:
1. Retail Analytics — The Secret Weapon, Emmett Cox
2. Business Analytics for Managers Wolfgang Jank Springer Science+Business Media, LLC 2011
3. Business Analytics in Retail For Dummies,® 2nd IBM Limited Edition by Jennifer Le Claire, Danielle Dahlstrom, and Vivian Braun ,John Wiley & Sons, Inc.
4. The Predictive Retailer, ANDREW PEARSON, Intelligencia Limited
5. Behavior Analytics in Retail, Ronny Max
6. The Little Book on Big Data: Understand Retail Analytics Through Use Cases and Optimize Your Business, MahoganyBeckford
7. TheNewScienceofRetailing:HowAnalyticsareTransformingtheSupplyChainandImprovingPerformance,Fisher and Raman

Suggested Reference Books :
1. Business Analytics Principles, Concepts, and Applications Marc J. Schniederjans, DaraG. Schniederjans, Christopher M. Starkey, Pearson
2. Retail Survival of the Fittest 7 Ways to Future-Proof Your Retail Store. Francesca Nicasio
3. Enterprise Management with SAP SEM™/ Business Analytics by Marco Meier, Werner Sinzig, and Peter Mertens Second Edition Nuremberg and Walldorf, November 2002
4. Data Analysis and Decision Making S. Christian Albright. Wayne L. Winston 5thEdition Cengage Learning

MOOCS Courses

NPTEL	• Introduction to Data Analytics • Supply Chain Analytics	https://onlinecourses.nptel.ac.in/
Swayam	• Big Data Analytics In Retail Industry	https://swayam.gov.in/
Coursera	• Supply Chain Analytics	https://www.coursera.org/
Edx	• Demand and Supply Analytics • Business Analytics	https://www.edx.org/

Udacity	• Business Analytics	https://in.udacity.com/
	• Predictive Analytics for Business	
Udemy	• Marketing Analytics for Retail	https://www.udemy.com/
	• Retail for Business Analysts	
Khanacademy	• Data analysis	https://www.khanacademy.org/
Futurelearn	• Big Data Analytics	https://www.futurelearn.com/

Semester IV	(SE – IL - MKT- 18)	414 MKT - Marketing to Emerging Markets & Bottom of the Pyramid
2 Credits	LTP: 1:1:0	Subject Elective (SE) Course – Marketing Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO414MKT.1	REMEMBERING	DESCRIBE the various practices and perspectives, concepts and characteristics of emerging Markets and BOP markets, its size & composition.
CO414MKT.2	UNDERSTANDING	EXPLAIN Characteristics, challenges and opportunities of Emerging Markets, BOP markets and need of segmentation of BOP markets.
CO414MKT.3	APPLYING	APPLY principles, BOP Protocol and Criticism of Marketing to BOP, to develop marketing decision-making skills for products and services in BOP markets.
CO414MKT.4	ANALYSING	COMPARE AND CONTRAST between emerging markets, developed markets and BOP markets
CO414MKT.5	EVALUATING	EVALUATE Demographic & economic scenario and Comparative Advantage of emerging market countries and next 11.
CO414MKT.6	CREATING	DEVELOP Marketing strategy to Emerging Markets and elaborate four elements of BOP strategy to relate it with the BRICS Market in the context of real-world marketing offering.

1. Overview of Emerging Markets:
1.1 Countries constituting emerging markets. Countries constituting BRICS & Next 11.
1.2 Growing economic power of emerging markets, Demographic & economic scenario of emerging market countries, Emerging Market size for different sectors.
1.3 Role of Emerging nation in the Corona free world.**(5+1)**

2. Emerging Markets - Perspectives & Practices:
2.1 Characteristics of Emerging Markets**:** Emerging markets versus developed markets - market heterogeneity, socio-political governance, chronic shortage of resources, unbranded competition, and inadequate infrastructure.
2.2 Comparative Advantage of Emerging Markets**:** Policy based advantage, raw material-based advantage, NGO based advantage Marketing Implications in terms of strategy, policy & practice of marketing
2.3 Determinants of attractiveness of emerging markets: opportunities, risks and trends in emerging markets.
2.4 Emerging markets: Marketing Implications in terms of strategy, policy & practice of marketing, Marketing Mix Implications.   **(7+2)**

3.Bottom of the Pyramid Markets:
3.1 Concept, Definition, Nature and significance of BOP Markets, Characteristics of BOP markets.
 3.2 Size & Composition of BOP markets all over the world.
3.3 Difference between Emerging Markets & BOP Markets
3.4 Criticism of Marketing to BOP & Alternate Perspectives.   **(5+1)**

4. Marketing Strategies for BOP Markets:
4.1 Four elements of BOP strategy - creating buying power, shaping aspirations, improving access, and tailoring local solutions.
4.2 C K Prahalad's 12 principles, BOP Protocol
4.3 Segmentation, Targeting and Positioning for BOP markets **(5+1)**

5. BOP Markets – The road ahead:

5.1 Challenges and Opportunities in BOP market

5.2 Effect of MACRO Environmental factors on BOP markets.

5.3 Case lets based on Marketing to BOP markets   **(3+1)**

Suggested Text Books:
- The Fortune at the Bottom of the Pyramid, Prahalad, C.K., Pearson –Singapore.
- Doing Business in Emerging Markets: Entry and Negotiation Strategies By S. TAMER AUTOR CAVUSGIL, S. Tamer Cavusgil, Pervez N. Ghauri, MilindR..Agarwal, Sage Publication.

Suggested Reference Books
- We are like that only, Bijapurkar, R. (2007), New Delhi: Penguin Portfolio.

Supplementary Reading Material
- Agnihotri, A. (2013) "Doing good and doing business at the bottom of the pyramid", *Business Horizons*, 56(5), 591-599.
- Bang V.V. and Joshi S. L. (2008), "Conceptualization of Market Expansion Strategies in Developing Economies", Academy of Marketing Science Review, 4, [Online] Available: http://www.amsreview.org/articles/bang04-2008.pdf
- Beshouri, C.P. (2006), "A Grassroots Approach to Emerging-Market Consumers." The McKinsey Quarterly, (March), pp.61-71
- Hammond, A., W. J. Kramer, R. S. Katz, J. T. Tran, and C. Walker. (2007), The Next 4 Billion: Market size and Business strategy at the Base of the Pyramid, World Resources Institute (WRI) and International Finance Corporation (IFC) [Online] Available: http://www.wri.org/publication/the-next-4-billion
- Dawar, N. and A. Chattopadhyay (2000), "Rethinking Marketing Programs for Emerging Markets", William Davidson Institute, working paper no. 320
- Holtbrügge, D. and Baron, A. (2013) "Market Entry Strategies in Emerging Markets: An Institutional Study in the BRIC Countries", *Thunderbird International Business Review*, 55(3), 237-252.
- Karamchandani, A., M. Kubzansky, and P. Frandano. (2009), Emerging Markets, Emerging Models: Market-Based Solutions To The Challenges Of Global Poverty Monitor group, (March).
- Karnani, A. (2007), "The Mirage of Marketing to the Bottom of the Pyramid: How the Private Sector Can Help Alleviate Poverty", California Management Review, 49(4), (Summer), pp.90-111.
- London, T. and S.L. Hart (2006), "Reinventing strategies for emerging markets: beyond the transnational model", Journal of International Business studies, (August), pp 1-21. Online available: http://e4sw.org/papers/JIBS.pdf
- Prahalad, C.K., and A. Hammond. (2002), "Serving the World's Poor, Profitably", Harvard Business Review, 80(September), pp. 48-57.
- Prahalad, C. K. and S. L. Hart. (2002), "The Fortune at the Bottom of the Pyramid", Strategy + Business, 26, pp.54-67.
- Preston, K, A. Libow, A. Bruno, C.Meade, and R. Wells. (2007), Opportunities for the Majority Index: Analysis of Corporate Performance in Latin America and the Caribbean, The Inter-American Development Bank, 21st December. [Online] Available:http://www.iadb.org/am/2008/docs/OM_Index_Final_Report_v2.pdf.
- Sheth, J. N. (2011), "Impact of Emerging Markets on Marketing: Rethinking Existing Perspectives and Practices", Journal of Marketing, Vol. 75 (July), 166 –182.
- Simanis, E. and S. Hart With J. DeKoszmovszky, P. Donohue,D. Duke, G. Enk, M. Gordon, and T. Thieme. (2008), The Base of the Pyramid Protocol: Toward Next Generation BoP Strategy, Center for Sustainable Global Enterprise, Johnson School of Management, Cornell University, 2nd Ed.[Online] Available: http://www.wdi.umich.edu/files/BoPProtocol2ndEdition2008.pdf.
- United Nations Development Programme (UNDP). (2008), "Creating Value For All: Strategies For Doing Business With Poor", The Growing Inclusive Markets Initiative,(July). [Online] Available: http://www.undp.org/gimlaunch/download.shtml
- Wilson, D. and R. Purushothaman. (2003) "Dreaming With BRICS: Path to 2050." Goldman Sachs, Global Economics Paper No.99, 1st October.
- World Business Council for Sustainable Development (WBCSD). (2004), Doing business with the poor – a field guide. (March). [Online] Available: http://www.wbcsd.org/DocRoot/uCxCgEiOhrCEXcsN5sIo/sl-field-guide-reprint.pdf

Websites
- http://www.wri.org/

- https://www.strategy-business.com/article/The-New-Fortune-at-the-Bottom-of-the-Pyramid?gko=c5f11

Journals

- International Journal of Emerging Markets
- Harvard Business Review
- California Management Review
- Journal of Macro Marketing

Subject Core (SC) Courses - Semester III Specialization: Financial Management

Semester III		304 FIN– Advanced Financial Management
3 Credits	LTP: 2:1:1	Subject Core - SC - FIN - 03

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 304.1	REMEMBERING	DESCRIBE the basic concepts in financing, investing and profit distribution in a firm
CO 304.2	UNDERSTANDING	EXPLAIN theoretical concepts related to raising and use of funds and value of firm
CO 304 .3	APPLYING	CALCULATE values for making capital structure, investment, liquidity and dividend decisions in the financial management of a firm
CO 304.4	ANALYSING	ANALYZE the options for making the right financial decisions of a firm
CO 304.5	EVALUATING	ASSESS the role of financial planning, risk analysis in investments, liquidity and credit management policy of the firm on shareholder value
CO304.6	CREATING	DESIGN an appropriate financial strategy using any one or multiple concepts/ techniques learned in this course.

1. **Financial Planning and Shareholder Value**: Overview of Financial Planning; Long term and short term sources of finance; Financial Statements including Funds Flow and Cash Flow Statements; Importance of Cash Flows; Concept of Financial Distress; Shareholder wealth and managerial behavior; Growth and Value; Concept and features of value-based management; Economic Value Added (EVA): Meaning, Components, Advantages & Drawbacks, Calculating EVA **(6+2)**

2. **Capital Structure and Firm Value:** Assumptions and Definitions; Net Income Approach; Net Operating Income Approach; Traditional Position; Modigliani and Miller Position Taxation and Capital Structure; Tradeoff; Signaling Theory; PBIT - EPS Analysis; ROI - ROE Analysis ; Leverage Ratios; Guidelines for Capital Structure Planning **(7+2)**

3. **Investment Decisions:** Meaning and Process, Risk and Uncertainty in Capital Budgeting: Capital rationing and Project Selection. Inflation and Capital budgeting; Capital budgeting practices in Indian companies **(5+2)**

4. **Working Capital Management**: Determination of level of current assets, Working capital financing by banks; Cash and liquidity Management- aspects of cash management, motives for holding cash and marketable securities, Cash Management Models, Strategies for managing surplus funds; Credit Management: Objectives of trade credit, credit policies. Control and collection of accounts receivables, role of factoring in receivables management **(No problems on estimation of working capital). (9+2)**

5. **Dividend Policy and Firm Value**: Why Firms Pay Dividends ; Factors Influencing Dividend Policy ; Legal and Procedural Aspects ; Bonus Shares and Stock Splits; Share Buybacks and Valuation ; Dividend Policies in Practice; Dividend Models: Walter's model, Gordon's model, Modigliani and Miller's Hypothesis; Models in Which Investment and Dividend Decisions are Related **(8+2)**

Note:

1. The weightage in the question paper shall be as follows: **Numerical problems: 60% & Theory: 40%**

2. Numerical problems on the following should be taught:
   - Funds Flow Statement and Cash Flow Statement
   - Calculating EVA
   - Firm value (Theories of Capital Structure), PBIT - EPS Analysis
   - Sensitivity analysis and Scenario analysis in risk analysis in Capital budgeting, Capital Rationing
   - Calculation of Optimum Cash Balance using Operating Cycle Model and Inventory Model
   - Receivables Management- calculation of collection period, Determining the number of uncollectible Receivables and Bad Debt Expense: Percent of Sales Method, Percent of Receivables Method
   - Dividend Models: Walter's model, Gordon's model, Modigliani and Miller's Hypothesis;

Suggested Textbooks:

1. Financial Management: Text and Problems by M Y Khan & P K Jain, Publisher: TMH, New Delhi.
2. Financial Management Theory & Practice by Prasanna Chandra, Publisher: TMH, New Delhi.
3. Financial Management by I M Pandey, Publisher: Vikas Publishing House, New Delhi.
4. Advanced Financial Management by Dr. Mahesh Abale & Dr. Shriprakash Soni, Himalaya Publication House

5.   Financial Management by Ravi Kishore, Publisher: Taxman's Publishing House, New Delhi.
6.   Financial Management by C. Paramasivan, T. Subramanian, New Age
7.   Financial Management by Dr. Anil Kumar Dhagat- Wiley India

Suggested Reading:
1.   Financial Management: Theory & Practice by Eugene F. Brigham, Michael C. Ehrhardt
2.   Fundamentals of Financial Management by Van Horne, Publisher: Prentice Hall of India.

Semester III		305 FIN – International Finance
3 Credit	LTP : 2:1:1	Subject Core (SC) Course – International Finance

Course Outcomes: On successful completion of the course the learner will be able to

CO#	Cognitive Ability	Course Outcomes
CO305FIN.1	Remembering	Enumerate the key terms associated with International Finance.
CO305FIN.2	Understanding	Summarize the various the concepts related to regulators, financial markets, Financial Instruments, tax structures at international level.
CO305FIN.3	Applying	Illustrate the role of international monitory systems & intermediaries in Global financial market.
CO305FIN.4	Analyzing	Inspect the various parameters of global financial market and interpret best possible international investment opportunities.
CO305FIN.5	Evaluating	Determine the various strategies to start investment or business at the international level by considering various factors of international finance.
CO305FIN.6	Creating	Formulate the investment plan or business plan by adapting international finance environment.

Unit Number	Contents	Number of Sessions
01	**Introduction to International Finance:** Meaning/Importance, Scope, Globalization of the World Economy, Goals of International Finance, Structure and participants of the global financial system, Functioning of the global financial system in the globalization process, The Emerging Challenges in International Finance, Evolution of International Monetary System, Gold Standard System, Bretton Woods System, Current Exchange Rate Arrangements, Issues involved in overseas funding choices, International Financial Institutions: International Monetary Fund, World Bank. International credit rating agencies, Balance of Payment: Component, Collection reporting, surplus & deficits.	8+1
02	**Introduction to Foreign Exchange Markets:** Structure of Foreign Exchange Markets, Types of Transactions and Settlement Date, Exchange Rate Quotations and Arbitrage, Interest Rate Parity, Purchasing Power Parity and Fisher's Parity, Forecasting Exchange Rates: Efficient Market Approach, Fundamental Approach, Technical Approach, Global Financial Markets and Interest Rates , Concept and types of currency, Convertibility of currency, Exchange rate: the nature, types and regimes, Demand and supply of foreign currency.	6+1
03	**The transactions on the international foreign exchange market:** Spot transactions, forward contracts, currency swaps, currency futures, currency options, Transaction Exposure -Forward Hedge, Money Market Hedge, International Credit Market, Different forms of international lending, Monetary and financial conditions of the international credit, International security market: Concept & trends of development, Intermediaries of the international security market; International market of foreign equities and euro equities & depositary receipts (ADR & GDR), International bond market, Foreign bonds market, Eurobonds market, Types of Bonds, floating Rate Notes (FRNs), Deep Discount	8+1

	Bonds, Zero Coupon Bonds, Dual Currency Bonds, and Equity related Bonds. Procedure for Bonds Issues.	
04	**Taxation Systems and Legal Aspects:** International double taxation and the ways of its regulation, Tax evasion, Definition of Money Laundering, organization of money laundering procedure: stages and methods, Monitoring, International cooperation in dealing with money laundering: the establishment of legal framework, The functions and activity of the FATF.	6+1
05	International Receivables and cash management, Foreign exchange risk, The essence and types of currency risks, Risks of making decisions about foreign direct investment, Political risk, International Financial Reporting Standards (I.F.R.S) and Indian Accounting Standards (I.A.S) on foreign transactions, Foreign Exchange Trade Settlement in India, SWIFT, CHIPS, CHAPS	7+1

Suggested Textbooks:
1. International Finance by Rajiv Srivastav,Oxford University Press
2. International Financial Management by P.G. Apte 2010 Ed.
3. International Financial Management by Vyuptakesh Sharan
4. International Financial Management by S.P. Sriniwasan
5. International Finance by Mauric Levi, Keith P. (2013 Edition)
6. Foreign Exchange, International Finance, Risk Management by A.V. Rajwade
7. Currency Exposures and Derivatives by A.V Rajwade

Suggested Reference Book:

1. International Finance, by Maurice Levi, 5th edition, Mc Graw Hill
2. International Financial Management by Jeff Madura; 2008, Cengage Learning
3. International Financial Management by Eun and Resnick, 4th edition Tata McGraw Hill
4. International Economics by Carbaugh 11th Edition, Cengage Learning.
5. Paul R Krugman and Maurice Obstfeld, 'International Economics', 8th edition
6. Multinational Financial Management by Alan Shapiro, 9th Ed, Wiley

Subject Electives (SE) Courses - Semester III Specialization: Financial Management		

Semester III		312 FIN – Behavioral Finance
2 Credit	LTP : 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	Cognitive Ability	Course Outcomes
CO312FIN.1	Remembering	Enumerate the key terms associate with behavior finance, investment in financial markets & Corporate finance.
CO312FIN.2	Understanding	Illustrate the various theories associated with behavior finance and parameters of investing in financial market.
CO312FIN.3	Applying	Identify persistent or systematic behavioural factors that influence investors and investment decisions.
CO312FIN.4	Analyzing	Analyse the various behavioural finance factors related to corporate & individual investors.
CO312FIN.5	Evaluating	Interpret various investment strategies of effective investment in the financial market on the basis of various theories and factors of behavioural finance.
CO312FIN.6	Creating	Plan the systematic approach of corporate and investors towards investment for stable growth on the basis of behavioural finance.

Unit Number	Contents	Number of Sessions
01	Introduction to Behavioral Finance: Concept, Nature, Scope, Objectives, Difference between Standard Finance and Behavioral Finance, Traditional View of Financial Markets, Anomalies of Financial Markets, Limitation of Efficient Market Hypothesis, Behavioral Financial Market Strategies, Behavioral Indicators, Psychology: Social, Behavioral, Physiological , Applied , Educational , Cognitive Psychology, Boom & Bust Cycles, Prospect Theory, Loss aversion theory,	4+1
02	Behavioral Biases theories : Heuristics, Overconfidence Bias, Representativeness , Anchoring and Adjustment bias, cognitive dissonance bias availability bias, self-attribution bias, illusion of control bias conservation bias, endowment bias, optimism bias, confirmation bias, Impact of bias on investors, External factors defining investors behavior, Fear and Greed in Financial Market, Finance & Emotions, Investors & types, Characteristics of extremely successful investor, Bubbles and systematic investors sentiments	4+1
03	Risk Aversion and expected marginal utility, Risk aversion- Rabin and Thaler, Expected utility theories, Rationality in investment decisions: Concept, Limitation, assumptions for rational decision making model, Rational decision making process, Dependency of Rationality on Time Horizon, Herbert Simon and Bounded Rationality, Arbitrage: Limits, Types, cost involved in arbitrage process, The model of limited Attention,	4+1
04	Geomagnetic storm: phase, types, causes, effect, Geomagnetic storm and financial market, Impact of geomagnetic storm on stock market return, Factors influencing stock & stock market, External factors and investors behavior, Classification of external factors influencing investors behavior, factors influencing on investors behavior,	4+1
05	Corporate Behavioral Finance: Introduction, Corporate decision making: Heuristic approach, prospect theory, market variables, herding effect, behavior of investors	4+1

and inefficiency of market, Empirical data on presence and absence of dividend, Ex-Dividend day behavior, timing of corporate news announcement, Behavioral life cycle.	

Suggested Textbooks:

1. Behavioral Finance: Psychology, Decision-Making, and Markets", by Ackert and Deaves.
2. Understanding Behavioral Finance by Ackert
3. The Psychology of Investing by John R. Nofsinger, Pearson Prentice Hall, (4th Edition)
4. What Investors Really Want - Learn the lessons of behavioral Finance, Meir Statman, McGraw-Hill
5. Behavioral Finance by Shuchita singh, Shilpa Bahl

Suggested Reference Book:

1. Handbook of Behavioral Finance – Brian R. Bruce
2. Behavioral finance - Wiley Finance - Joachim Goldberg, Rüdiger von Nitzsch
3. Behavioral finance – Peter Dybdahl Hede
4. Behavioral Finance – Ackert, L.F. & Deaves,R

Semester III		313 FIN: Technical Analysis of Financial Markets
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO102.1	REMEMBERING	Remember the concepts, terminologies, frameworks, tools, techniques and theories of technical analysis taught in the syllabus.
CO102.2	UNDERSTANDING	UNDERSTAND the applications of technical analysis and the various types of charts and the psychology behind a pattern and its formation
CO102.3	APPLYING	MAKE PRACTICAL USE of the Theories, Models, Principles and Frameworks of technical analysis for estimating market prices of different securities
CO102.4	ANALYSING	ANALYSE AND FORECAST the market prices of securities in order to take and execute investment decisions
CO102.5	EVALUATING	FORMULATE an ideal portfolio of investments with a combination of wide number of securities

1. **Introduction to Technical Analysis:** Definition and Concept, Price discounts everything, Price movements are not totally random, Technical Analysis: Basic Assumptions, Strengths and Weakness of Technical Analysis, Importance of Technical Analysis, Dow Theory – Introduction, Principles of Dow Theory, Significance of Dow Theory, Problems with Dow Theory, Constructing and Interpreting Charts and the formation, Evolving a Trading strategy based on patterns. **(4+1)**

2. **Company Analysis Using Technical Analysis:** Understanding various Charts: Bullish Trend, Bearish Trend, Price Chart, Line Chart, Bar Chart, Japanese Candle Stick Chart, Point and Figure Chart, Candlestick Patterns – Doji, Harami, Piercing, Engulfing, Morning Star, Evening Star, Hammer, Inverse Hammer and Hanging Man, Chart Patterns – Support and Resistance, Reversal Patterns - Head and Shoulder Formation, Inverse Head and Shoulder Formation, Double Formations, Rounding Patterns, Rectangle Formation, Wedge Formations, Continuation Patterns – Triangles, Flags and Pennants, Overall Decision Making for Purchase / Sale of Share of a Company. **(6+1)**

3. **Company Analysis Using Market Information:** Volume and Open Interest, Concept and Calculation of Oscillators from the data of five years prices, High, Low, Average Price, Simple Moving Averages, Exponential Moving Averages, Rate of Change Indicators (ROC), Relative Strength Index, (RSI), Moving Average Convergence and Divergence (MACD). **(5+1)**

4. **Trading Strategies**: Day Trading, Advantages of Day Trading, Risks Associated with Risk Day Trading, Strategies for Day Trading, Momentum Trading Strategies. Elliot Wave Theory, Elliot Wave – Introduction, Fundamental Concept, After Elliott. **(5+1)**

5. **Trading Psychology and Risk Management:** Introduction and Components of Risk Management, Stop Loss, Analyze Reward Risk Ratio, Trail Stop Loss, Booking Profit, Uses of Stop Loss, Qualities of Successful Trader, Golden Rules of

Traders, Do's and Don'ts in Trading, Rules to Stop Losing Money Choosing the Right Market to Trade, Importance of Discipline in Trading, Efficient Market Theory. **(5+1)**

Suggested Books:
1. Technical Analysis of financial markets: A comprehensive guide to trading methods & applications – John J. Murphy
2. Technical Analysis Explained: The Successful Investor's Guide to Spotting.
3. Investment Trends and Turning Points - Martin J. Pring.
4. Technical Analysis of Stock Trends, 8th Edition - Robert D. Edwards, John Magee, W. H. C. Bassetti.
5. Technical Analysis for Indian Financial Markets – Shriram Nerlekar, Ashish Kelkar

Semester II		314FIN: Commodities Markets
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO314FIN.1	REMEMBERING	DESCRIBE the key concepts of commodities market
CO314FIN.2	UNDERSTANDING	Understanding the pricing mechanism of commodity, regulatory framework and the difference between commodity and financial derivatives
CO314FIN.3	APPLYING	APPLY all the required strategies and calculations of commodities trading.
CO314FIN.4	ANALYSING	ANALYZE both the fundamental and technical factors that drive the commodity price movements
CO314FIN.5	EVALUATING	EVALUATE the various methods and tools to detect the pulse of the markets and determine the trend in which the prices are moving.
CO314FIN.6	CREATING	ADAPT the skills of commodity analysis and build their own trading strategies

1. **Understanding Commodities and Derivatives:** - Definition of commodity, Kinds of commodity, importance of commodity, Commodities as a New Asset Class, Evolution of Commodity Exchange, FCR Act 1952 and Regulatory structure of Commodities Derivatives Markets in India, Definition of derivative, Types of Derivatives, Over the Counter Derivative, Exchange Traded Derivatives, Difference between commodity and financial derivatives, Physical settlement, Warehousing, Historical changes and growth of global and domestic Commodities derivatives markets, Global commodities derivatives exchanges : - Africa, Asia, Latin America, Commodities as an investment tool for investors, The Kabra committee report and Latest developments. Evolution of Commodity Exchange, NCDEX Platform - Structure of NCDEX, commodities traded on NCDEX platform
 (4+1)
2. **Product design and Instruments for trading and pricing of commodity derivatives:** - Issues Related to Product Design and contract specifications, Issues related to Spot price and present practices of commodities exchanges, Agricultural Commodities Markets & Non- Agricultural Commodities Markets: Issues in Agricultural Commodities Markets, Agricultural Commodity Futures trading pattern in Exchange – Case study , Issues in Non-Agricultural Commodities Markets, Commodities Derivative Exchanges and design of the markets, Non- Agricultural Commodity Futures trading pattern in Exchange – Case study. Basis Risk and its importance in pricing, Commodity Options on Futures and its mechanism. Instruments available for trading Forward contracts, Futures, Distinction between futures and forwards contracts, Options, Basic payoffs, Payoff for futures, Payoff for options, Pricing commodity futures, Investment assets versus consumption assets, The cost of carry model, Pricing futures contracts on investment commodities, Pricing futures contracts on consumption commodities. **(7+1)**
3. **Basic principles of hedging, speculation and arbitrage:** Using commodity futures, Hedging: - Basic principles of hedging, Short hedge, Long hedge, Hedge ratio, Advantages of hedging, Limitation of hedging, Speculation: - Speculation: Bullish commodity, buy futures, Speculation: Bearish commodity, sell futures, Arbitrage: - Overpriced commodity futures: buy spot, sell futures, Underpriced commodity futures: buy futures, sell spot. (5+1)
4. **Market Mechnism**: Trading- Futures trading system, Entities in the trading system, Guidelines for allotment of client code, Contract specifications for commodity futures, Commodity futures trading cycle, Order types and trading

parameters, Margins for trading in futures, Charges. Clearing and settlement, Clearing: - Clearing mechanism, Clearing banks, Depository participants, Settlement: - Settlement mechanism, Settlement methods, Entities involved in physical settlement, Risk management. (4+1)

5.   **Analysis of commodities:** - Introduction to Technical Analysis, Philosophy of Technical Analysis, Relationship between Price and Time, Volume and Open Interest, Basics of Dow Theory, Basic concepts of Trend, Lines Support & Resistances, Reversal and Continuation Patterns, Basics of Gap Theory, Introduction to Indicators and Oscillators. Fundamental Analysis in Commodity Market, Basic Significance of Fundamental Analysis, Classification of Commodities, Factors Affecting Commodities, Analytical Techniques, Commodity Baskets, Correlation Between Commodities, Interrelation between Other Asset Classes and Commodities **(5+1)**

Suggested Text Books:
1.   Commodity Derivatives – IIBF
2.   Futures & Options (equities & commodities) – A.N. Sridhar
3.   Commodity Derivatives: Markets and Applications - Neil C. Schofield
4.   Commodity Derivatives: Markets and Applications (The Wiley Finance Series) - Neil C. Schofield

Suggested Reference Books
1.   Commodities and Commodity Derivatives: Modeling and Pricing for Agricultural, Metals and Energy – Helyette Geman
2.   Risk Management in Commodity Markets: From Shipping to Agricultural and Energy (The Wiley Finance Series) – Helyette Geman
3.   Guide to Indian Commodity Market : Ankit Gala & Jitendra Gala
4.   Commodities Markets and Derivatives : B. Kulkarni

Supplementary Reading Material
NCFM Module on Commodity Derivatives

SEMESTER III		315 FIN – Indirect Taxation
2 Credit	**LTP : 1:1:1**	**Subject Elective (SE-IL) Course – Financial Management**

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	Cognitive Ability	Course Outcomes
CO315FIN.1	Remembering	Remembering the key concepts of Indirect Taxes in India Identifying and enumerating the various terms associated with GST and other indirect taxes.
CO315FIN.2	Understanding	Explain how GST works as an Uniform Tax Structure, Illustrate the GST framework of India, & describe the important concepts such as supply, dual taxation method, registration process, etc.
CO315FIN.3	Applying	Apply the theories and Principles and perform all calculation through numerical problems on valuation and calculation of taxes. Identify the time value of supply; determine the taxable person and tax levied on goods and services.
CO315FIN.4	Analysing	Illustrate the e filling process of GST Categorize the Goods and Services under GST and amount of tax to be paid using Dual tax concept.
CO315FIN.5	Evaluating	Evaluate Input Tax Credit Process, reversal, late filing and New Amendments; appraise various indirect taxes; Interpret the GST framework in India & verify the tax levied on Goods and Services.
CO315FIN.6	Creating	Elaborate all Provisions of GST and can correlate with filing of returns; virtual e filling can be done Estimate the GST, TDS, anticipate goods, services, tax payable person for the business.

1. **Introduction:** Indirect Taxes - Customs, Excise Duty, VAT, GST. Concept, Need and Genesis of GST. **Dual GST Model:** CGST, SGST, UTGS, IGST. GST Network, GST council, Role and Phases of GST Council, Constitutional provisions to enforce indirect Taxes & GST, CESS **(5 + 1)**

2. **Registration under GST:** Registration Procedure, Persons not liable for registration, Compulsory registration, Deemed registration, Cancellation vs. Revocation of registration, Unique Identification Number, Registration Number Format. **(5 + 1)**
   Types and periodicity of GST return for different categories of Taxpayers (Regular Tax Payer, Composition Tax Payer, Casual Taxable Person, Non-Resident Taxable Person, etc). **(5 + 1)**

3. **Supply under GST and Valuation of Supply: Key Concepts-** Levy and Collection of Tax, Supply, Place of Supply, Interstate and Intrastate Supply, Export of Service, Export of Goods, Imports of Goods, Import of Service, Valuation of Supply, Types of Supply under GST Regime, Composition Levy, Exemption from tax, Person liable to pay tax, Tax Deduction at source (TDS) under GST**. (5 + 1)**

4. **Input Tax Credit under GST & Returns:** Input Tax Credit Process, Negative List for Input Tax Credit, Input Tax Credit Utilization and Input Tax Credit Reversal, Types of GST returns and their due dates, late filing, late fee and interest. Reverse Charge Mechanism
   New GST Returns - Overview, Forms, Invoices, ITC, Amendments, Offline Tools; New GST Return System, Forms to be filled and Process of New Return Filing System; New Amendments introduced in New GST Return System. **(5 + 1)**

5. Definitions of certain terms relating to the custom act, custom tariff act, Levy and types of custom duties, Basic customs duty, IGST, Protective duties, Safeguard duty, Countervailing Duty on subsidized articles, Anti-dumping duty, Import Procedure, Export Procedures, Valuation of Imported Goods, Valuation of Export Goods, Penalties under Customs, Refund. **(5 + 1)**

*Note: 1. Numericals will be asked on valuation and calculation of Taxes (Unit 3).
(80: 20 :: Theory : Numerical)

Suggested Books:
1. Indirect Tax Reform in India: 1947 To GST and Beyond Book by Vinay K. Srivastava and Yashwant Sinha
2. GST Acts, Rules & Forms with Reference By Ashok Batra
3. Taxmann's Basics of GST
4. Taxmann's GST: A practical Approach Theory & Practice of GST, Srivathsala, HPH
5. Theory & Practice of GST: Dr. Ravi M.N, PBP.

Semester III		316 FIN – Corporate Financial Restructuring
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316FIN.1	REMEMBERING	DESCRIBE the basic concepts related corporate restructuring, Mergers & Acquisitions, Valuation Aspects of Corporate Restructuring and Corporate Governance Aspects of Restructuring
CO316FIN.2	UNDERSTANDING	EXPLAIN the motivations, decision processes, transaction execution, and valuation consequences of financial, business, and organizational restructuring by corporate units.
CO316FIN.3	APPLYING	PERFORM all the required calculations through relevant numerical problems.
CO316FIN.4	ANALYSING	ANALYZE the situation by calculations of exchange ratio, financial returns, valuations and others.
CO316FIN.5	EVALUATING	EVALUATE impact of corporate financial restructuring on all stakeholders

1. **Basic concepts:** Meaning of Corporate Restructuring, Need, Scope, Concept of Internal & External Restructuring and motives, applications of corporate restructuring. **(4+1)**

2. **Overview of Corporate Finance and Corporate restructuring** Financial Restructuring & Divestiture, Funding Options for M&A. Strategic Alliances & Joint Ventures, Employee Stock Ownership, Going Private & Leveraged Buyouts. Creating Value through Corporate Restructuring-Corporate Reorganization Strategies-Spin-Offs, Equity Carve-Outs, Target Stock and Divestures, Financial perspective in restructuring, Reorganization strategies in

corporate organizations, Financial Distress & Bankruptcy, Liquidation, Net Operating Losses, Sources of Funding & Problem of changing Capital Structure, Strategic and Financial Sponsors, Pros and Cons of different Sponsors, Capital Cash Flows Vs. Equity Cash Flows. **(6+1)**

3. **Dimensions of Mergers & Acquisitions:** Mergers & acquisitions concept, types and process, Accounting for Mergers & Demergers, Regulatory framework of mergers and acquisitions. Due diligence for M&A, Cross-Border Mergers & Acquisitions. Take-over and Defense Tactics Structural Defenses Vs. Non Structural Defenses, Contribution Analysis, Duties of Board of Directors, Market for Corporate Control. **(4+1)**

4. **Valuation Aspects of Corporate Restructuring:** Methods of payment for M & A and Calculations of exchange ratio, Fundamental and methods of business valuation, Calculations of financial synergy and return, Different approaches of valuation – Comparable company & transaction analysis method, DCF, Real Option method, Equity/Residual Cash Flows, Adjusted Present Value, Capital / Leveraged Cash Flows, Relative Valuation Analysis, Sensitivity Analysis, Tables, Developing Break Up Analysis. **(6+1)**

5. **Corporate Governance Aspects of Restructuring:** Domestic & International trends relating to governance practices pertaining to Corporate Restructuring, Reference of Corporate Governance in Indian Companies Act (Amended) 2013, SEBI Regulations, Listing Agreement etc. Shareholder democracy in restructuring process, role of investors creditors, role of non-executive directors in restructuring process, Disclosures and Clarifications on the part of Board of Directors and Inclusion in the Auditors' Report. **(5+1)**

Note:

1. To facilitate understanding of corporate merger and acquisition activity, restructurings and corporate governance relevant Cases should be incorporated in teaching pedagogy.

2. **Numerical Problem will be asked on the following:**
1. Calculations of exchange ratio,
2. Calculations of financial synergy and return,
3. Different approaches of valuation – Comparable
4. Company & transaction analysis method, Discounted Cash Flow (DCF),
5. Real Option method,
6. Formula approach for valuation and other important methods of valuation.

Suggested Text Books:
1. Corporate Restructuring, Bhagaban Das and Debdas Raskhit, Himalaya Publishing House
2. Financial Management, R. P. Rustagi, Galgotia Publishing
3. Strategic Financial Management, Ravi M. Kishor, Taxmann,
4. Mergers, Acquisitions and Corporate Restructurings, Gaughan, P.A., John Wiley and Sons
5. Financial Management, Prasanna Chandra, TATA McGraw Hill

Suggested Reference Books
1. Mergers & Acquisitions, B Rajesh Kumar, TATA McGraw Hill, Latest Edition
2. Mergers and Acquisitions, Aurora, Shetty and Kale, Oxford,
3. Takeovers, Restructuring, and Corporate Governance, James J. Fred Weston, Mark L. Mitchell, J. Harold, Pearson
4. Corporate Finance, Ashwath Damodaran, Wiley India,

Supplementary Reading Material
1. Case Studies in Mergers & Acquisitions – ICFAI University – ICFAI University Press,
2. Case Studies on Mergers & Acquisitions – R. Muthukumar – ICFAI University Press

List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.
1. Business Standard
2. The Economic Times
3. Financial Express
4. Journal of Applied Finance
5. CFA Reader
6. Business Today
7. Finance India

Semester III		317 FIN: Financial Modeling
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO317.1	REMEMBERING	Remember the concepts, terminologies, frameworks, tools and techniques of Financial modeling
CO317.2	UNDERSTANDING	UNDERSTAND the applications and use of MS Excel in financial modeling and its different techniques
CO317.3	APPLYING	DEVELOP, APPLY and actually use core functionality of MS Excel in decision framework to solve managerial problems
CO317.4	ANALYSING	ANALYSE different financial models in order to eliminate substantial risk of poor spreadsheet coding
CO317.5	EVALUATING	FORMULATE an idea and acceptable solutions to solve different problems in the area of financial management
CO317.6	Creating	BUILD financial models by making appropriate assumptions on financial factors relevant to the situation.

1. **Introduction:** Meaning, Benefits and Uses of Financial Modeling. **1.2) Basic Excel for Financial Modeling:** Formatting of Excel Sheets, Use of Excel Formula Function, Advanced Modeling Techniques, Data Filter and Sort, Charts and Graphs, Table formula and Scenario building, Lookups: Vlookup Match & offset, pivot tables. **(5+1)**
2. **Financial Statement Analysis:** Introduction to Financial Statement Analysis, Financial Reporting Mechanics, Understanding Income Statement, Balance Sheet, Cash Flow Statement, Financial Analysis Techniques, Inventories, Long Lived Assets, Non Current Liabilities, Application of Financial Statement. **(5+1)**
3. **Financial Ratios:** Ratio analysis of industries, Du point Analysis, Peer to peer analysis, Preparation of Financial Analysis report on an industry. **(4+1)**
4. **Financial Management:** Time value of money, Long term financing, Cost of capital, Measure of Leverage, Budgets, Types of Budgets. **(4+1)**
5. **Equity Research Modeling:** Prepare an Income Statement, Balance sheet, Cash Flow Statement, Geographic Revenue Sheet, Segment, Revenue Sheet, Cost Statement, Debt Sheet, Analyze Revenue Drivers, Forecast Geographic & Segment Revenues, Cost Statement, Debt, Income Statement, Balance Sheet, and Cash Flow Statement, Performa Adjustments, Income Statement - Compute Margins, Balance Sheet -Compute Ratios, Cash Flow Statement Projection, Valuation- Discounted Cash Flow Method (DCF), Valuation – Relative Valuation (Football Field Chart), Valuation – Assumptions for Valuation Model, Prepare Valuation Model, Prepare Presentation Sheet, Prepare Company Overview , Sector Overview. **(7+1)**

Suggested Books:
1) Business Data Analysis using Excel – David Whigham – Oxford University Press
2) Mastering Financial Modeling in Microsoft Excel – Alastair L. Day
3) Practical Financial Modeling – Jonathoan Swan

Reference Books:
1) Financial Modeling Using Excel and VBA by Chandan Sengupts, John Wiley & Sons
2) Building Financial Models with Microsoft Excel: A Guide for Business Professionals, K. Scott Proctor, 2nd Edition, John Wiley & Sons
3) Advanced Modeling in Finance using Excel and VBA By Mary Jackson, Mike Staunton, John Wiley & Sons
4) Next Generation Excel: Modeling in Excel for Analysts and MBAs By Isaac Gottlieb, John Wiley & Sons
5) Financial Modeling Module, NSE Academy

Semester III		318 Fin–Digital Banking
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course- Financial Management (Fin)

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO318 Fin.1	REMEMBERING	Remember various concepts and products in Digital Banking
CO318 Fin.2	UNDERSTANDING	Explain and understand the significance and development of Digital Banking
CO318 Fin.3	APPLYING	Compare and contrast the Branchless Banking and Traditional Banking
CO318 Fin.4	ANALYSING	Analyze the payment system of digital banking from consumer's point of view
CO318 Fin.5	EVALUATING	Evaluate Role of digital banking and emerging technologies in economic development

1. **Introduction to Digital Banking:** Concept, Advantages, Products, significance, development of digital Banking, Distinct Functionaries/Dimensions of a Digital Bank , Customer Education for Digital Banking, Role of digital banking in economic development, Financial Inclusion **(5+1)**

2. **Digital Banking Products: ATMs :** Instant Money Transfer Systems, Proprietary, Brown Label and White Label ATMs, ATM Network Planning – Onsite / Offsite, Security and Surveillance of ATM Sites, **Cash Deposit Machines :** Overview, Features, CDM Network Planning – Onsite / Offsite and Profitability of CDMs, **Mobile Banking**: Overview and Brief History, Product Features and Diversity, IMPS, Profitability of Mobile Banking, Risk Management and Frauds, **Internet Banking** : Product Features Corporate and Individual Internet Banking, Integration with e-Commerce Merchant sites, Back End Operations and Technology, **(7+1)**

3. **Branchless Banking:** Objectives, Introduction, Financial Inclusion – Logic and logistics, Vehicles for Financial Inclusion, Business Correspondents / Business facilitators, Digital Banking Products for Financial Inclusion **(4+1)**

   Payment System: Overview of global and domestic payment systems, Immediate Payment Service (IMPS), National Unified USSD Platform (NUUP) and UPI, Participants in UPI, Benefits to Participants, National Automated Clearing House (NACH) Aadhaar Enabled Payment System (AEPS) , e-KYC , Cheque truncation System (CTS) , National Financial Switch (NFS) , RTGS , NEFT, (6+1)

4. **Innovation and Banking**: Innovative Technologies in Banking: Artificial Intelligence, Machine Learning, Big Data, Block Chain, Forex Settlement **(3+1)**

Suggested Books:
   1. Digital Banking – Indian Institute of Banking and Finance
   2. The Digital Banking Revolution – Lugi Wewege
   3. Digital Bank : Strategies to Launch or become a Digital Bank – Chris Skinner

Reference Material:
   1. Banking Beyond Banks and Money : A guide to Banking Services in Twenty first Century – Paolo Tasca, Tomaso Aste, Loriana Pelizzon, Nicolas Perony
   2. www.rbi.org.in

SEMESTER III		319 FIN – Treasury Management
2 Credit	LTP : 2:1:0	Subject Elective (SE-IL) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	Cognitive Ability	Course Outcomes
CO315FIN.1	Remembering	Remembering the key concepts of Treasury Management, Treasury markets, cash management, and internal controls.
CO315FIN.2	Understanding	Explain organisation structure and functions of treasury, Illustrate cash flow cycle, relate various types of risks; describe the important concepts such as liquidity, controls, etc.
CO315FIN.3	Applying	Identify the market participants, treasury products, Apply the concepts of , forex cash management. Use concepts to mitigate financial and operational risks.
CO315FIN.4	Analysing	Outline the responsibilities and functions of Treasury Manager, Classify types of Treasury markets, Illustrate and analyse the risk.

| CO315FIN.5 | Evaluating | Explain the structure and organisation of Treasury; compare types of liquidity, controls and audits; appraise funding alternatives. Appraise the moral and ethical aspects in treasury management. |
| CO315FIN.6 | Creating | Design the money and funds management plan in a given situation using various concepts and instruments used in treasury function. |

1   **Basics of Treasury Management:** Evolution, Objectives, Organization Structure of Treasury, Functions of treasury, Responsibilities of Treasury Manager, Role and Functions of RBI, Recent Developments in the RBI's Policy Framework.

2   **Classification of Treasury Markets:** Domestic and International; Foreign Exchange Markets, Role of Banks in Forex Market, Factors impacting Forex Market, International Treasury – Market participants, various forex Treasury products, volatility of major currencies, currency Trading. Short Term and Long Term Funding, Cost Centre / Profit Centre: Financial Planning and Control, Capital Budgeting, Risk Analysis **(5 + 1)**

3   **Cash Management:** Meaning and Importance of Cash Management, Objectives of Cash Management, Cash Flow Cycle, Cash Flow Budgeting and Forecasting, Liquidity Management: Objectives, Sources & Maturity Concerns: Short term and Long term Liquidity **(5 + 1)**

4   **Internal Control:** The Need and Importance – Financial and Operational risks – Internal v/s External Control, The Need and Significance of Internal and External Audit. **(5 + 1)**

5   **Treasury's role in International Banking:** Changing Global Scenario and Treasury Functions, Treasury Structure- Front and Back Office, Forex Cash Management – Positions v/s Cash Flows Funding Alternatives, Moral and Ethical aspects.
                       (5 + 1)

Suggested Books:
6. Financial Management – Ravi Kishore
7. Cost Accounting & Financial Management – Ravi Kishore – Taxman Publication,
8. Corporate Finance & Investment –R. Pike and B Neale – Prentice Hall of India,
9. International Corporate Finance – Ghosh Roy - Mac Milan India
10. Effective Management Workout – V.K.Singh – Himalaya Publishing House

Websites:
1. www.treasury-management.com
2. www.iibf.org.in
3. www.icai.org,

Semester III		320 FIN - Project Finance and Trade Finance
2 Credits	LTP: 1:2:0	Subject Elective (SE-IL) Course – Finance Specialization

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO320.1	REMEMBERING	DESCRIBE the concepts of Project Finance and Trade Finance.
CO320.2	UNDERSTANDING	SUMMARIZE the key aspects in context with Project Finance and Trade Finance.
CO320.3	APPLYING	IDENTIFY the applicability of Project Finance and Trade Finance in modern business era.
CO320.4	ANALYSING	EXAMINE the risks involved in Project Finance and Trade Finance.
CO320.5	EVALUATING	EVALUATE the proposal of securing finance by considering the capital structure and documentation involved.

1.   **Project Finance & Trade Finance Overview:** Definition & Characteristics of Project Finance, Pre-requisites, Typical PF examples. **Trade Finance (TF)**: Importance of Trade Finance, Benefits of Trade Finance. Who benefits from trade finance, Challenges for SMEs in accessing trade finance. **(5+1)**

2.   **Project Evaluation Criteria & Domestic Trade –** Steps Involved In Project Assessment, Introduction to Capital Budgeting tools & techniques for Project evaluation, Cash Flow Management, Measures used by Investors: Payback

period, Net Present Value (NPV), Internal Rate of Return (IRR) Domestic trade-method of Financing - Working Capital - Appraisal and sanction - Deferred payment guarantee - Securitization - Factoring. **(5+1)**

3.   Current Project Finance Market: PF market expansion, Market highlights, PF market by sector, PF market by geography. **Project Financing in India:** Means of Finance, Norms and Policies of Financial Institutions, SEBI Guidelines, Sample Financing plans, Schemes of assistance, term Loans procedures, Project Appraisal by Financial Institutions. **(5+1)**

4.   Project & Trade Finance Risks -Project Finance and Commercial Risks ,Project Finance and Macroeconomic Risks, Regulatory and Political Risk, Risk Mitigation Methodologies for Projects, Risks involved in trade finance - country risk, currency risk, credit risk, counter party risk, exchange risk, legal risk. **(5+1)**

5.   Process & Documentation in Project & Trade Finance- Assess the appropriateness of the capital structure and features of the debt structure and its Documentation- Security and credit rights, Payment waterfall, Collateral and assignment of contract rights, Rights of the controlling classes, inter-creditor issues, Structural features, Debt service covenants, Reserve accounts, cash sweeps, profit distribution controls, Refinancing risk Documents used in Trade - Bill of Exchange, Invoice, Bill of Lading, Airway Bill, Insurance Policy. **(5+1)**

Suggested TextBooks:
1.   Project Management – Prasanna Chandra
2.   Principles of Project Finance - Yescombe, E. R. (2002), Academic Press, California.
3.   How to access trade finance, James Sinclair, Trade Finance Global.

Suggested Reference Books
1.   Advanced Project Management – Harrison F.L.
2.   Project financing (7 ed.) - Nevitt, P.K. & Fabozzi, F. J. (2000), London, UK: Euromoney Books
3.   Investment project design - A guide to financial and economic analysis with constraints, Kurowski, L. & Sussman, D (2011), New Jersey: John Wiley & Sons.
4.   Project finance for construction and infrastructure: Principles and case studies - Pretorius, F., Lejot, P., McInnis, A., Arner, D.& Hsu, B. F.-C. (2008), Oxford: Blackwell Publishing.
5.   Trade Finance Guide, A Quick Reference for U.S. Exporters
6.   Comptroller's Handbook Trade Finance and Services, Version 1.0, April 2015

Semester III		321–Insurance Laws and Regulation
2 Credits	LTP: 2:0:0	Subject Elective- Institute Level

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO321.1	REMEMBERING	RELATE to terminologies used in Insurance Law
CO321.2	UNDERSTANDING	EXPLAIN the role of insurance law in overall development of the country through risk management and insurance coverage.
CO321.3	APPLYING	IDENTIFY risk management plans , strategies and techniques in Life and General Insurance.
CO321.4	ANALYSING	APPRAISE Regulatory Framework of Insurance Business in India & Corporate Governance Practices for Insurance Companies.
CO321.5	EVALUATING	ASSESS the insurance policies in the light of risk valuation.

1.   Introduction: History and Evolution of Insurance; Risk Management;. Nature of Insurance Contract; Types of Insurance Life and General Insurance. Constitutional Perspective. Theory of Cooperation, Theory of Probability, Principles of Insurance, Utmost Good Faith, Insurable Interest & Reinsurance. Ethics and Corporate Governance Framework for Insurance Companies.   (4)

2.   Regulatory Framework of Insurance Business in India: Development of Insurance Legislation in India and Insurance Act 1938; Insurance Regulatory and Development Authority of India (IRDAI) Functions and Insurance Councils; IRDAI and its Licensing Functions; Policy Holders Rights of Assignment, Nomination and Transfer; Protection of Policy Holders Interest; Dispute Resolution Mechanism; Financial Regulatory Aspects of Solvency Margin and Investments; International Trends In Insurance Regulation. Other Relevant Legislation (Motor Vehicles Act, Marine Insurance Act,

Employees State Insurance Act etc.), Consumer Protection, Courts, Tribunals, Insurance Ombudsmen, Arbitration. Corporate Governance Practices for Insurance Companies. (8)

3.	Life Insurance: Nature, Scope and Practice, Application of Principles in Life Insurance Contract –- Representation - Assignment and Nomination - Title and Claims - Tax Law Implications - Concept of Trusts in Life Policy - Stamp Duties - Role and Function of Life Insurance Companies. Life Insurance & Pension Products.	(5)

4.	General Insurance: Practices and Procedures: Introduction to General Insurance; Policy Documents and forms; Underwriting; General Insurance Products : Property Insurance (Fire and Engineering) , Marine Insurance (Hull and Cargo) , Motor Insurance, Business Interruption , Liability Insurance (Public, Products, Professional, Directors & Officers etc) , Personal Lines (Health, Accident, Travel, Residential Premises etc.) , Rural and Agricultural ,Micro-Insurance , Other Miscellaneous lines (Burglary, Bankers' Risks, Fidelity etc.). (8)

5.	International Insurance and Regulation: Formation of International Insurance contracts;International Association of Insurance Supervisors – Future Trends . Enforcement and settlement. Conventions regulating Insurance on Maritime and Nuclear disaster. (5)

Suggested Text Books:
1.	T.S. Mann, Law And Practice Of Life Insurance, Deep and Deep Publications,7th edn (2011)
2.	Utpal Rajan Sarkaar, Motor Accidents And Motor Insurance Claims, Sodhi Publications,5rd Edn.(2015)
3.	R.P Katariya, An Exhaustive Commentary On Motor Vehicle Act 1988,Unique Law Publications,5th Edn (2012)

Reference Reading:
1.	Banerjee, law of insurance, Asia Law House, Hydrabad,(1997)
2.	J.V.N Jaiswal,Law Of Insurance, Eastern Book Company,9th edn.(2008)
3.	Principles and Practice of Life Insurance,Committee on Insurance and Pension ,The Institute of Chartered Accountants of India,Fourth Edition-October, 2008, New Delhi
4.	Insurance - Law & Practice, The Institute Of Company Secretaries Of India, December 2019 ,New Delhi

Semester III		322FIN – Marine Insurance
2 Credits	LTP: 1:2:0	Subject Elective (SE-IL) Course – Finance Specialization

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO322FIN.1	REMEMBERING	Enumerate the key terms associate with Marine Insurance, Documentation and Reinsurance.
CO322FIN.2	UNDERSTANDING	Understand various statutes applicable, necessary arrangements and documentation required for Marine Insurance.
CO322FIN.3	APPLYING	Determine the insurance cover and policy type considering the risk involved.
CO322FIN.4	ANALYSING	Detect the insurable interest, probable losses and the profitability element.
CO322FIN.5	EVALUATING	Evaluate the risk involved and need for reinsurance
CO322FIN.6	CREATING	DESIGN the Marine Insurance Policy on a hypothetical situation

1.	**Introduction to Marine Insurance:** Definition, Concept, Significance, Reasons of Marine Insurance and Application Process, Scope of Marine Insurance, Nature &Functions of Marine Insurance, General Features of Marine Insurance. Meaning of Marine Perils, Warranties & Types of Warranties, Meaning of Underwriting & Role of Underwriter. **(5+1)**
2.	**Fundamental Principles and Legal Framework of Marine Insurance:** Principle of Utmost Good Faith, Principle of Insurable Interest, Principle of Indemnity, Principle of Subrogation. First Lloyd's Act & Second Lloyd's Act **(5+1)**
3.	**Arranging for Insurance (Cargo)**: Proposal Form – factors for acceptance –Type of Vessel – The Voyage or Transit – Type of Cargo – Packing forms – Containerization – Conditions of Insurance – Inco Terms – Declaration Forms – Marine Cover Note – Policy Form – endorsements – Container Transport.
4.	**Marine Insurance Policy-** Introduction to Marine Insurance Policies, Types of Marine Policies-Time & Voyage Policies, Special Rules for Voyage Policies, Time Policy and Mixed policy. **(5+1)**

5.   Risk Management & Reinsurance- Introduction to Reinsurance, Need for reinsurance, Risk distribution through reinsurance, Reinsurance Process flow, Risk Management through reinsurers, Types & Benefits of Reinsurance, Maritime Frauds, Types of Maritime Frauds, Prevention of Maritime Frauds. **(5+1)**

Suggested Textbooks:
1.The Principles of Marine Insurance, A. Primer, Harold Turner
2. Controlling Cargo Theft, Tyska Fennely
3. Inland Marine Insurance, Roderick McNamma
4. Law of Marine Insurance, Hodges, Susan
5. Bennet Marine Insurance Fraud, Baris Soyer
6. Law of Marine Insurance, Howard

Suggested Reference Books
1.   Marine Insurance Law, Ozlem Gruses, Routledge
2.   Cases and Materials on Marine Insurance law, Susan Hodges, 1st Edition
3.   A System of the law of Marine Insurances, Sir James Alan Park, Hardpress Publisher
4.   Law of Representations, John Duer, Hardpress Publisher

Semester III		323FIN: Fire Insurance
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO323.1	REMEMBERING	UNDERSTAND the major concepts and terms in fire insurance
CO323.2	UNDERSTANDING	EXPLAIN the procedure of underwriting, claims and settlement
CO323.3	APPLYING	IDENTIFY the types of Fire Hazards and the suitable policies
CO323.4	ANALYSING	ANALYSE the Inspection and Survey Reports
CO323.5	EVALUATING	DETERMINE the Claim Amount in the Fire Insurance Claim
CO323.6	CREATING	DESIGN the Fire Insurance Policy on a hypothetical situation

1.   Understanding and Managing Risk - Nature of Risk – Risk Analysis – Planning – Control - Mechanism for Transfer of risk Insurance and Reinsurance, Overview of Concepts of Insurance (briefly explain Insurable Interest - Indemnity - Uberrimae fidei - Proximate Cause - Subrogation and Contribution - Differentiation between Insurance and Guarantee - Insurance and Wager - Disclosure – Moral Hazards), Regulation of General Insurance Business in India, Types of General Insurance, key players in the General insurance market **(5+1)**
2.   Introduction to Fire Insurance: Origin of Fire Insurance, Fire Insurance Policy, Scope of Fire Insurance, Purpose of Fire Insurance, Fire Insurance under Indian Insurance Law, Types of Fire Policies **(3+1)**
3.   Fire Hazards: Introduction to General Fire Hazards, Exposure Hazard, Electrical Hazard, Fire and Explosion Hazard, Hazards of Dangerous Atmosphere and Metals, Fire Protection Systems, Fire Hazards of Specific Industries – Textile, Jute, Rubber, Paper, Chemical, Management and Housekeeping **(6+1)**
4.   Fire Underwriting and Procedures: Introduction, Fire Insurance Underwriting, Fire Risk Assessment, Risk Assessment Process, Documents – Proposal Form, Risk Inspection Report, Tariff System, Standard Fire and Special Peril Policy, Terrorism Cover, Fire – Consequential Loss Insurance, Basis for Profit Insurance, Operative Clause of the Policy, Consequential Loss Insurance Premium Rate. **(7+1)**
5.   Fire Insurance Claims and Settlement: Legal and procedural aspects of Fire Insurance Claim, Survey & Loss Assessment, Important Aspects of Survey, Survey Report, Important terms for various calculations, Redressal Forums **(4+1)**

*Notes:
Samples of the following Insurance Documents to be shown and discussed:
   a.   Proposal Forms
   b.   Policy Forms
   c.   Cover Notes
   d.   Certificates of Insurance

    e.   Endorsements
    f.   Renewal Notic

Suggested Textbooks:
1. Fire insurance underwriting (2005) , Venkataraman, Shushila, Insurance Institute of India Mumbai
2. Fire Insurance, William S. Hein & Company, Lester W. Zartman
3. Principles and Practice of Non-Life Insurance by P. K. Gupta, Himalaya
4. KSN Murthy and Dr. KVS Sarma: Modern law of Insurance in India (6th Ed), Levix Nexis Butter Worths India
5. Fire insurance: theory and practice, Smith & Francis
6. Fire underwriting in theory and practice, George Hurren
7. Practical Aspect of Fire Insurance, Sudhir Kumar Jain, Sanjay Gupta

Suggested Reference Books:
1. Principles and Practice of General Insurance, Committee on Insurance and Pension, The Institute of Chartered Accountants of India,
2. Principles of Insurance Law, M. N. Srinivasan, Wadhwa & Co.,
3. Insurance Law and Practice, Vidhi Publication Private Limited, Rajiv Jain
4. Insurance Manual, Taxmann Publication Private Limited, Taxmann
5. Manual of insurance Laws, Bharat Publication Private limited, Bharat
6. Law of Insurance, Universal Publication Pvt. Limited, Dr. Avtar Singh
7. Principles of Risk Management and Insurance, George E. Rejda

Subject Core (SC) Courses - Semester IV		
Specialization: Financial Management		

Semester IV		403 FIN: Financial Laws	Course
3 Credit	**LTP : 2:1:1**	SUBJECT CORE (SC) COURSE: Specialization – Financial Management (FIN)	

Outcomes: On successful completion of the course the learner will be able to:

CO#	Cognitive Ability	Course Outcomes
CO403 .1	Remembering	Define and Describe the basic concepts related to Financial Laws
CO403. 2	Understanding	Illustrate the implications of various laws, Explain concepts and details of various financial laws.
CO403. 3	Applying	Make use of contextual financial laws applicable to organisations.
CO403. 4	Analyzing	Infer the application of financial laws to organisations
CO403. 5	Evaluating	Appraise and perceive the benefits of applicable laws to the organisations.

Unit Number	Contents	Number of Sessions
01	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002: Meaning & Definition of Securitisation & Reconstruction, Formation of SARFAESI Act, 2002, SARFAESI Act 2002 - Need for the new law, Objectives , Scheme of the Act, Salient features, Incorporation & Registration of Special Purpose Companies, Funding of Securitisation, Assets Reconstruction, Enforcing Security Interest, Establishment of a Central Registry, Offences & Penalties, Boiler-plate Provisions Applicability, Exempted transactions, SARFAESI Process and Documentation.	8+1
02	Corporate Debt Restructuring and Strategic Debt restructuring: Meaning, Definition and Importance. CDR and GDR: difference, mechanism, Scheme, Debt Restructuring Process, Benefits, Corporate Financial Distress, Restructuring, and Bankruptcy. Scheme for Sustainable Structuring of Stressed Assets (S4A Scheme)	8+1
03	India Laws and Regulations Governing International Business Transactions: FERA/FEMA, Taxation of foreign income; Foreign investment; Setting up offices and branches abroad	8+1
04	The Actuaries Act : Definition, Need, Importance, Objectives, Incorporation of Institute of Actuaries of India, Composition of council of institute, Functions of Council, Registration of Members, Appointment and Prosecution of Director, Constitution of Appellate authority, Appeal to authority, Penalty, Companies not to engage n actuarial practice, Quality Review Board: Establishment, functions, procedure, terms and conditions of chairperson and members of board	8+1
05	Insolvency & Bankruptcy code: Introduction, Concept of Insolvency and bankruptcy, Distinctive Features and Evaluation of the Code, Insolvency Resolution & liquidation process for corporate, Voluntary Liquidation of Corporate Person, Insolvency Resolution & Bankruptcy for Individuals & Partnership Firms, Adjudicating Authority under the Code, and Liability of Guarantors during the Corporate Insolvency Resolution Process.	8+1

Suggested Textbooks:
1. Guide to SARFAESI Act 2002 & Recovery of Debts and Bankruptcy Act 1993 (September 2016 Edition), Taxmann's Publication
2. Corporate Financial Distress, Restructuring and Bankruptcy By Edward L. Altman, Wiley Finance Series.
3. Corporate Restructuring by David Vange, Springer Publication
4. Transnational commercial law: International Instruments and Commentary, by Roy Goodey, Oxford Publication

5. Practical Guide on Foreign Trade Policy by Kalirajan D.
6. Achieving Your Pinnacle A Career Guide For Actuaries By Tom Miller
7. Indian Insurance Industry And The Appointed Actuary by Khan, Liyaquat; Sarma, K P & Gopal, ASI Publication
8. Guide to Insolvency and Bankruptcy Code (7th Edition 2019) by V.S. Datey, Taxmann's Publication
9. Insolvency and Bankruptcy Code 2016-As amended by Insolvency & Bankruptcy Code (Amendment) Ordinance 2019 (12th Edition 2020), Taxmann's Publication

Suggested Reference Book:
1. Handbook on Foreign Trade Policy 2015-2020
2. Actuaries' Survival Guide: How to Succeed in One of the Most Desirable Professions by Fred E Szabo
3. A handbook on Insolvency and Bankruptcy Code: A condensed guidebook for Directors and Executive Management by Ashish Makhija, IOD

Supplementary reading material:
1. The Securitization And Reconstruction Of Financial Assets And Enforcement Of Security Interest Act, 2002
2. The Actuaries Act, 2006

Magazines:
1. The Actuary India

websites:
1. http://rbi.org.in
2. www.taxmann.com

Semester IV		404 FIN Current Trends & Cases in Finance
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404FIN.1	REMEMBERING	DESCRIBE the concepts related to emerging areas of Microfinance, Small finance banks, Payment Banks, Start-Ups, SHG and Digitization and analytics
CO404FIN.2	UNDERSTANDING	EXPLAIN in detail, all the theoretical concepts taught through the syllabus
CO404FIN.3	APPLYING	APPLY the various theories and models of financial management in the case.
CO404FIN.4	ANALYSING	ANALYSE the situation and decide the key financial as well as non-financial elements involved in the situation.
CO404FIN.5	EVALUATING	EVALUATE the financial impact of the alternative on the given case.

1. **Microfinance –** Meaning, definition and conceptual framework and its history– Models of microfinance – Microcredit Vs Micro-savings Vs Microfinance – Microfinance institutions (MFI) Development of microfinance in India – GOI, RBI and NABARD initiatives for development of microfinance in India – Innovative microfinance models in India – Issues faced by microfinance in India – case study of SKS MFI and Grameen Bank. **Value chain financing – Rural finance –** need for rural finance – Chit fund finance and its regulation in India – Sharadha chit fund case study, Shadow banking.
2. **Small Finance Banks –** Operating guidelines of Reserve Bank of India for small finance banks – Small finance banks and financial inclusion – History and list of small finance banks –functions of small finance banks – Business model of small finance banks. **Self Help Group Approach:** The Concept, Why Self-Help Groups? – Objectives – Promotion, Group Dynamics in Growth of SHGs: Issues to be addressed – General Functioning Norms, What are the Books kept by a SHG? Best Empowerment Strategy, Networking of Self Help Groups; Institutionalization of Self Help Movement; Objectives and Functions of Networking – Credit Rating and Bank Linkage, Grading of Self Help Groups; Development of Rating Instrument – Linking of Self Help Group to Bank, Step-wise process of Operating of SHG
3. **Retail Banking**: Alternate delivery channels – Customer Relationship management vs. Customer Interaction management (CIM)-Technology as a differentiator- International Trends and Tools. **Payment banks -** Operating guidelines of Reserve Bank of India for payment banks –Payment banks and financial inclusion – History and list of payment banks – functions of payment banks – Business model of payment banks.

4. **Startups in India** –Fund raising norms for startups - SEBI regulations on startup listing and fund raising – Angel funding – Origin of angel funding – SEBI regulations on angel funding – Financial Technology –Fintech companies in India - Prepaid payment mechanism in India – Prepaid payment mechanisms – Smart cards, magnetic stripe cards, internet accounts, online or e-wallets, mobile accounts, mobile wallets and paper vouchers – Types of e-wallets – RBI regulations on prepaid payment mechanism – Growth of prepaid payment mechanism in India. The expanding role of automation and digitisation, collaborative decision-making models and accelerated pace of change in operating conditions due to digital technology. Financial (Data) Analytics- the concepts, increased reliance on data, Decision driven data. Schemes Available for new startups by Government in the form of Finances

5. The case study will be based on Financial Management and Advance Financial Management Course syllabus.

Note: To facilitate understanding of the syllabus maximum relevant Cases should be incorporated in teaching pedagogy.

Text Books And Reference Books:
1. Buzzard, Shirley and Elaine Edgcomb. 1987. Monitoring and Evaluating Small Business Projects: A Step by Step Guide for Private Development Organizations. PACT, New York (an electronic copy of this book is posted at Blackboard).
2. Kindervatter, Suzanne. 1987. Doing a Feasibility Study: Training Activities for Starting or Reviewing a Small Business. OEF International, Washington, D.C. (an electronic copy of this book is posted at Blackboard).
3. Ledgerwood, Joanna. 2001. Microfinance Handbook: An Institutional and Financial Perspective. World Bank Publications, Washington, D.C.
4. Collins, Daryl, Jonathan Morduch, Stuart Rutherford and Orlanda Ruthven. 2009. Portfolios of the Poor: How the World's Poor Live on $2 a Day. Princeton University Press, Princeton, New Jersey.
5. https://www.rbi.org.in/
6. https://www.nabard.org/english/home.aspx
7. https://www.startupindia.gov.in/

Supplementary Reading Material
1. Case Studies in Mergers & Acquisitions – ICFAI University – ICFAI University Press,
2. Case Studies on Mergers & Acquisitions – R. Muthukumar – ICFAI University Press

List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.
1. Business Standard
2. The Economic Times
3. Financial Express
4. Journal of Applied Finance
5. CFA Reader
6. Business Today
7. Finance India

Subject Elective (SE) Courses - Semester IV
Specialization: Financial Management

Semester IV		409 FIN- Fixed Income Securities
2 Credit	LTP : 2:1:0	SUBJECT ELECTIVE (SE - IL)- Fixed Income Securities

Course Outcomes: On successful completion of the course the learner will be able to

CO#	Cognitive Ability	Course Outcomes
CO409FIN.1	Remembering	Describing the basic concepts of Fixed Income Securities
CO409FIN.2	Understanding	Understanding the various types of securities traded in the fixed income market and the concepts related to the risk and returns of the Fixed income securities
CO409FIN.3	Applying	Applying the knowledge of fixed income securities for diversifying the portfolio of investments
CO409FIN.4	Analyzing	Predictive analysis of the economic outlook through yield curve analysis
CO409FIN.5	Evaluating	devise the various investment strategies based on portfolio returns.

Unit Number	Contents	Number of Sessions
01	**Introduction of Fixed Income Security and its Markets:** Overview of Fixed Income Securities, Fixed Income Instruments, Government Securities, Treasury Bills, Money Market Instruments, Corporate Bonds, and Asset Backed Securities, Market Conventions, Market Regulation and the Role of regulator. Sectoral Reforms and contemporary issues.	3+1
02	**Returns, Valuation and Pricing of Fixed Income Securities :** Current yield, Realized yield, Yield to maturity, Valuation & pricing of Plain Vanilla Bond on coupon date, Valuation & pricing of Plain Vanilla Bond in between coupon dates, Day Count Convention, Clean Price & Dirty Price, Valuation of a zero- coupon Bond, Valuation of Bond with Embedded option.	6+2
03	**Risk Identification in Bonds-** Volatility associated with Bond Market, Duration, Macaulay's Duration, Modified Duration, Effective Duration, Convexity, and Immunization	6+2
04	**Investment Strategies for FI Securities:** Optimizing Portfolio Returns, Laddered Maturity Portfolio, Barbell Investing, Matched Asset Program, Discount Bond Investing, Premium Bond Investing.	3+1
05	**Yield Concepts and Term Structure Theories:** Price Yield Relationship, Term Structure of Interest rates & Yield Curve, Shape of the yield curve, Term Structure Theories, Analysis of the Yield curve	5+1

Suggested Textbooks:
1. Investment Trends and Turning Points - Martin J. Pring.
2. Valuation, Risk Management and Portfolio Strategies (The Wiley Finance Series) – Lionel Martelline, Philippe Priaulet, Stephane Priaulet.
3. The Handbook of Fixed Income Securities - Frank J. Fabozzi, Steven V. Mann
4. Fixed Income Securities- Dr Varsha Nerlekar (Himalaya Publication)

Suggested Reference Book:
1. Choudhry, M. (2010). Introduction to Bond Markets. UK: John Wiley & Sons.

2. Fabozzi, F. J. (2016). Bond Markets, Analysis, and Strategies. USA: Pearson Education.
3. National Stock Exchange of India. (2009). FIMMDA-NSE Debt Market (Basic) Module. Mumbai: NSE.
4. Sen, J. & Apte, A. (2013). Fixed Income Markets in India: Investment Opportunities for You. India: Shroff Publishers & Distributors.

Semester IV		410 FIN – Business Valuation
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course- Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO410.1	REMEMBERING	RECALL concepts of value and valuation
CO410.2	UNDERSTANDING	EXPLAIN valuation process of business firms
CO410.3	APPLYING	CALCULATE business value using different techniques
CO410.4	ANALYSING	EXAMINE special factors to be considered in business valuation
CO410.5	EVALUATING	ASSESS the value of the firm in the light of business environment and regulatory aspects

1. **Overview of Valuation:** What is value; Differentiate price and value; Who values businesses; Purpose of a valuation;, Principles of valuation; Definition of Standard of value (basis of valuation),   Fair Market value, Fair value, Investment value, Intrinsic value; Premise of value- Going concern, Liquidation; Valuation process; Valuation standards **(3)**
2. **Business Valuation Methods:** Discounted Cash Flow Analysis (DCF); Comparable transactions method; Comparable Market Multiples method; Market Valuation; Free Cash Flow to Equity; Dividend Discount Model; Net Asset Valuation; Relative Valuation; Overview of Option Pricing Valuations (Numerical aspect of the methods should be discussed) **(12)**
3. **Advanced issues in Valuation**: Valuation of tangible assets; Valuation of intangible assets (Patents, trademarks, copyrights and licenses; Franchises; Brands etc.) **(5)**
4. **Valuation during Mergers & Acquisitions**: Merger and Acquisition Process, Regulatory Consideration, Due diligence and calculation of the value of the company, Criteria for selection of method **(4)**
5. **Case studies from Industry on Valuation**: (at least 2 Cases with a detailed discussion on calculation of business value) **(6)**

Suggested Textbooks:
1. Corporate Value & Value Creation by Chandra and Prasanna, McGraw Hill
2. The Little Book of Valuation: How to Value a Company, Pick a Stock and Profit – Aswath Damodaran
3. Parks - Principles and Practice of Valuation – D.N. Banerjee
4. Business Valuation, Text & Cases: Pitabas Mohanty, Taxmann
5. Valuation Measuring and Managing the Value of Companies (Wiley Finance) – McKinsey & Co.

Suggested Reading:

1. Valuation by Registered Valuers under Companies Act 2013 & Insolvency and Bankruptcy Code 2016 –
a. Kamal Garg
2. Corporate Professionals Business Valuation in India – Beyond the Numbers (2018)
3. Business Analysis and Valuation: Using Financial Statements, Text and Cases 3rd Edition by Krishna G. Palepu , Paul M. Healy ,Victor L Bernard

Semester III		411 FIN – Risk Management
2 Credit	LTP : 1:1:0	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	Cognitive Ability	Course Outcomes
CO411FIN.1	Remembering	Describe various concept associated with risk management and financial risk management.
CO411FIN.2	Understanding	Exemplify the financial risk management processes, frameworks.
CO411FIN.3	Applying	Determine the various building blocks of risk management system and strategies.
CO411FIN.4	Analyzing	Classify various risks associated with enterprise, banks, insurance etc.
CO411FIN.5	Evaluating	Formulate the strategies to overcome with currency risk, credit risk, interest rate risk, legal risk, asset liability risk, liquidity risk etc.

Unit Number	Contents	Number of Sessions
01	**Basics of Risk Management:** Definitions of risk, Types of risks, Risk description, Inherent level of risk, Impact of risk on organizations, Impact of hazard risks, Risk and uncertainty, Principles of risk management, Importance of risk management, Risk management process, and Risk management framework. Financial Risk Management: Concept, Importance, Scope, Process of financial risk management.	3+3
02	**Risk & Volatility Measurement:** need of risk management , role of rate and price in determination of risk, Factors that impact financial rates and price: Interest rates, Foreign Exchange Rates, Commodity Price, Operational Risk; Market Data Analysis, Probability and distributions of asset prices, measuring return and risk, Modeling Risk Factors, Using implied volatility in Value-at-Risk measures; Measuring risk using Value-at-Risk, concept and computation of VAR using variance-covariance approach, Calculating portfolio risk of more than one Assets. Historical simulation & multifactor VaR, Marginal and relative VaR, expected shortfalls, treasury applications. Concept & need of volatility measurement, The issue of time aggregation, different measures of volatility such as EWMA, ARCH & GARCH processes, volatility clusters and the issue of time varying volatility.	3+3
03	**Risk Management In Banking:** Concept, Risk management structure in bank, Credit risk management, liquidity risk, interest rate risk, counterparty risk, market risk, environmental risk, currency risk, legal & regulatory risk, rating risk, pricing risk & capital allocation risk, loan review, NPA management, Risk in investment banking, capital risk; Basel committee norms for banking , Financial risk management using derivatives and insurance,	3+3
04	**Risk Management for Enterprise:** concept, scope, enterprise risk, approaches for corporate risk management, ERM, Types of enterprise risk: technology risk, business strategy risk, legal and regulatory risk, product liability risk. **Risk Management In Insurance:** Introduction, Functions & Types of risk: Actuarial Risk, Asset liability risk, risk and capital, management of underwriting risks, investment risk, Investment management by insurers, investment risk management framework & policies.	3+3
05	**Credit Risk Basics:** Probability of Default, Credit ratings & Transition Matrix analysis, Contingent claim approach and the KMV Model, Credit Risk Management and Credit VaR. **Currency risk analysis:** Currency risk analysis in global investing, interest rate parity (covered and uncovered), yen-carry trade syndrome, risk environment in	3+3

	Indian Forex markets, forwards and non- deliverable forwards, cross-currency risk analysis	

Suggested Textbooks:
1. Corporate Financial and Risk Management - Nersesian, Roy L. - Jaico Publishing House
2. Financial Risk Management: A Practitioner's Guide to Managing Market and Credit Risk - Steve L. Allen
3. Modern Corporate Risk Management: A Blueprint for Positive Change and Effectiveness by Koller

Suggested Reference Book:
1. Investment Science. Luenberger, Oxford University Press, 1998
2. Options, Futures and other Derivatives, John Hull, 7th Edition, Prentice Hall, 2008
3. An Introduction to Market Risk Measurement by Dowd, Kevin, John Wiley & Sons.
4. Risk Management and Financial Institutions by Hull, John C., Pearson, Prentice Hall, 2007 Measuring Market Risk by Dowd, Kevin, John Wiley & Sons, 2005. Value at Risk by Jorion, Philippe, McGraw Hill.
5. Beyond Value at Risk, by Dowd, Kevin, John Wiley & Sons Mastering Value at Risk ,Butler, Cormac,
Financial Times Prentice Hall Risk Takers, Marthinsen, John, Pearson Prentice Hall, 20096.

Semester IV		412 FIN–Strategic Cost Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO412FIN.1	REMEMBERING	Remember the basic concepts, tools and techniques of cost management in the contemporary business environment and how it has influenced cost management
CO412FIN.2	UNDERSTANDING	EXPLAIN in detail, all the theoretical concepts taught through the syllabus; differentiate between various costing techniques.
CO412FIN.3	APPLYING	ILLUSTRATE contemporary management techniques and how they are used in cost management to respond to the contemporary business environment.
CO412FIN.4	ANALYSING	ANALYSE the situation and decide the key cost factors / elements involved in the decision making
CO412FIN.5	EVALUATING	FORMULATE new models and techniques for managing the cost strategically in any business organization.

1. **Introduction to Strategic Cost Management:** Meaning, conceptual framework, significance and objectives of SCM, , Traditional Cost Management Vs Strategic Cost Management. Role of SCM in Strategic Positioning & Strategic position analysis, Cost Control and Cost Reduction in SCM, Cost of Quality **(5+1)**
2. **Strategic Cost Analysis and Decision making in SCM:** Life Cycle costing, Target Costing, Value Analysis and Value Chain analysis, Value Engineering, Value management, Throughput Costing, Lean Accounting, Socio Economic Costing**,** Business Process Outsourcing (BPO) **(5+1)**
3. **Activity Based Costing:** Concept, Purpose, Benefits and Stages, Relevance in Decision Making and its Application in Budgeting. Traditional Vs. ABC System – Comparative Analysis, Application of ABC. **(5+1)**
4. **Strategic Cost Management for Specific Sectors:** Agricultural Sector, Information Technology Sector, Power Sector, Automobile Sector, Healthcare sector, Hospitality Sector, Education Sector, etc. **(5+1)**
5. **Target Costing and Kaizen Costing:** Target Costing – Introduction, Key Principles, Methodology, Procedures, Advantages and Implementation. Kaizen Costing – Meaning, concepts, procedure for implementation, evaluation, benefits, challenges and standards. Target Costing v/s Kaizen Costing: Similarities and Differences.**(5+1)**

Suggested Text Books:
1. Strategic Cost Management – Dr. Jawahar Lal, Himalaya Publishing House.
2. Cost Management – Kishore Ravi M., Taxmann
3. Cost Accounting. Lal, Jawahar. Tata Mcgraw-Hill Pub. Co. Ltd.

Suggested Reference Books

1. Strategic Cost Management The New Tool for Competitive Advantage – John K. Shank & Vijay Govindrajan, The Free Press.

2. Cost Management A Strategic Emphasis – Edward Blocher, David Stout, Paul Juras & Steven Smith, McGraw Hill Education

SEM IV		413FIN -Rural & Micro Finance
2 Credits	LTP: 2:0:0	Subject Elective(SE) Course-Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO413.1	REMEMBERING	DEFINE the key concepts of Microfinance and other terms associated with it.
CO413.2	UNDERSTANDING	EXPLAIN and UNDERSTAND the relevance of Microfinance and how its work towards rural development & growth.
CO413.3	APPLYING	IDENTIFY Micro Finance Models and their contribution towards, economic growth, poverty elimination , women empowerment and gender equality.
CO413.4	ANALYSING	ANALYZE the linkage between MFIs and Rural development
CO413.5	EVALUATING	EVALUATE the significance and funding Microfinance Institutions & Self-Help Group.
CO413.6	CREATING	FORMULATE and DISCUSS Cases related to MF (Models) &Rural development, Women Empowerment and Gender Equality.

1.Overview of Microfinance: Background, Concept, Fundamentals of Microfinance, Characteristics of Micro Finance, Microfinance & Banking, The Grameen Bank, Microfinance &Micro Credit, Microfinance
1. NGOs, Channels of Microfinance, Microfinance & Rural Development- Role of MFIs and Rural credit, Types of rural Credit Poverty Microfinance and Economic Well-being ,Microfinance & Women Empowerment, Financial Inclusion.   **(6+1)**

2.Microfinance Lending Models and its Financial & other Products: Microfinance Delivery Models and Banks Linkages Programme MFI Group Lending Model, MFI Individual Lending Model, MFI Loan Products & Related Issues, MFI Savings & Saving Products, Remittances, MFI Micro insurance.   **(5+1)**

3.Microfinance Service Providers and Microfinance Institutions: Governance and the Constitution of the Board of Various Forms of MFIs in India, Intermediaries for Microfinance, Commercialization of Microfinance Institutions, Challenges to Microfinance Institutions.   **(4+1)**

1. Microfinance & Self Help Groups: Meaning of SHGs, Pattern of their Functions-Funding Agencies of these SHGs-Provisions under SHGs- Savings, Credit, Marketing & Insurance, Financial & Social Inclusion through SHGs, SHGs and entrepreneurship development, NABARD and SHGs - SHGS & Bank Linkages - SHGs and Training Programmes, SHGs and Economic Empowerment, Role of SHGs in Poverty alleviation- Cases related to Indian Context.   **(5+1)**

5.Issues , Trends and Strategic alliances in Microfinance: Emerging issues in Microfinance, Recent Trends in Microfinance, Microfinance & Sustainable Development, Role of Technology in Microfinance,

Microfinance & Gender equality, Impact of Microfinance on Women empowerment.   **(5+1)**

Suggested Books:

1. Microfinance in India by K G Karmakar, March 2008Sage Publication Private Ltd.
2. Macro Dynamic of Micro Finance Daniel Lazar P. Natarajan MalabikaDeo Excels Books 2010
3. The Economics of Microfinance by Jonathan Morduch and Beatriz Armendariz
4. Micro Finance and Poverty eradication - Indian and global experiences Dr. Daniel Lazar Prof. P.Palanichany New Century Publication, New Delhi 2008
5. A.N.Agarwal and KundanaLal: - Rural Economy of India – Vikas publishing House Ltd. – New Delhi-110014, 1990
6. Vasant Desai- A Study of Rural Economy
7. Johns Hopkins School of Advanced International Studies: Microfinance and Development 1, taught by Elissa McCarter and Kate Druschel Griffin.
8. Rudradath and K.P.M.Sundaram-Indian Economy—S.Cand& Co. Limited, New Delhi110055, 2008
9. S.K.Mistra& V.K.Puri – Indian Economy- Himalaya Publishing House, Mumbai- 400004, 2008.

Semester III		414 FIN: Reinsurance
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO323.1	REMEMBERING	UNDERSTAND the major concepts and terms in Reinsurance
CO323.2	UNDERSTANDING	EXPLAIN the execution and legal applications in insurance contracts
CO323.3	APPLYING	IDENTIFY the forms of reinsurance according to the cases
CO323.4	ANALYSING	ANALYSE the insurer policy
CO323.5	EVALUATING	EVALUATE the insurer's security and claim procedure

1. **Introduction to Reinsurance:** Nature of reinsurance – Analysis of factors that influence results – Historical background – Reinsurance in India before & after nationalization and liberalization – GIC – Reinsurance Markets - Types of markets, National markets, Buyers of reinsurance, Sellers of reinsurance, Reinsurance brokers , Services available from the market, The broking system compared with direct insurance   **(3+1)**
2. **Legal Principles and Practices of Reinsurance:** Introduction, The reinsurance needs of direct insurers, Forms and methods of placing reinsurances, Reinsurance practices and problems , The nature of reinsurance contracts , The law applicable to reinsurance contracts, The form of contract, Insurable interest , Utmost good faith, Indemnity, Construction of a reinsurance policy, Rights of the re-insured policyholders , Insolvency of the reinsured, Winding up and set-off Disputes between the parties, Conflict of laws, Reinsurance brokers   **(7+1)**
3. **Forms and Categories of Reinsurance :** Facultative Reinsurance, Treaty Reinsurance, Proportional Reinsurance, Non-proportional reinsurance, Quota share treaties, Surplus treaties, Facultative Obligatory treaties, Excess-of-loss Reinsurance, Excess-of-loss Reinsurance, Risk – attaching Reinsurance, Loss occurring coverage, Fire Reinsurance, Accident Reinsurance, Marine and aviation reinsurance, Life reinsurance   **(7+1)**
4. **Reinsurance Program and Risk Management**: Factors affecting reinsurance program, Procedure to be followed for Reinsurance Arrangements, Risk Management in Reinsurance – Alternative Risk Transfer (ART), Finite Reinsurance, Insurance Risk Securitization, Insurance Derivatives – Futures, Option, Swap   **(3+1)**
5. **Reinsurance Accounting and Management:** type of investment, relationship of assets and liabilities, evaluation of insurer's security, insurer failure, financials regarding reserve deposits, payment of interest, allocation of capital, capital requirements for payment of liabilities, claim procedure, dispute resolution   **(5+1)**

Suggested Text Books:
1. Reinsurance Simplified – Jagendra Rana, BlueRose Publishers
2. Reinsurance Accounts – K. L. Naik, published by The Insurance Times
3. Reinsurance : Principles and Practices – Gerathewohl, Klaus

4. Reinsurance for Beginners – Mohammed Sadullah Khan
5. Reinsurance : Fundamentals and New Challenges – Ruth Gastel

Suggested Reference Books
1. Understanding Reinsurance Treaty Slips – K. L. Naik, published by The Insurance Times
2. Reinsurance – R.L. Carter, L.D. Lucas, N. Ralph

Semester IV		415 FIN: Agricultural Insurance
2 Credits	LTP: 1:2:0	Subject Elective (SE) Course – Financial Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO415FIN.1	REMEMBERING	Recall the different terms related to Agriculture Insurance and classification of agricultural insurance products
CO415FIN.2	UNDERSTANDING	Understand the process of crop insurance and the Global outlook of Agricultural insurance
CO415FIN.3	APPLYING	Apply the agricultural insurance concepts and assess the loss and settlement amount
CO415FIN.4	ANALYSING	ANALYSE the regulatory mechanism and Government schemes for agriculture insurance
CO415FIN.5	EVALUATING	Evaluate the different types of risks involved in agriculture

1. Introduction to Agriculture Insurance: Definition of Agriculture Insurance, Basic Concepts of Agricultural Insurance, Need for Rural/Agricultural Insurance, How should Government support in Agricultural Insurance, Classification of Agricultural Insurance Products, Problems and Prospects of Agriculture Insurance **(5+1)**

2. Risks in Agriculture and Crop Insurance – **Risks in Agriculture** -Changing face of Agricultural Risks in India –Climate change and Agriculture-Managing Agricultural Risks. Digital revolution in Agri-risk Insurance, Technological Revolution in Managing Crop Risk. **Crop Insurance** -Evolution of Crop Insurance in India-individual based crop insurance -Pilot Crop Insurance Scheme (PCIS)-Comprehensive Crop Insurance Scheme (CCIS)- Experimental Crop Insurance Scheme (ECIS)- National Agricultural Insurance Scheme (NAIS)-Farm Income Insurance Scheme (FIIS) **(5+1)**

3. Live- Stock Insurance and Poultry Insurance in India: History of cattle insurance, Cattle Insurance Policy, Livestock insurance schemes promoted by Central Government. Cattle Insurance Policy, - Loss assessment & settlement, Loss Minimization, Poultry Insurance: History of Poultry, Poultry Insurance Policy, Market Agreements underwriting, Loss Assessment & settlement, Loss Minimization **(5+1)**

4. Government Schemes: Pradhan Mantri Fasal Bima Yojana: Objectives, Highlights of the scheme, Farmers to be covered, Unit of Insurance, Coverage of Crops, Premium Rates Under PMFBY, Risks covered. **Modified National Agriculture Insurance Schemes:** Objectives, crops covered risks covered & exclusions, sum insured nature of coverage and indemnity. **Weather Based Crop Insurance Scheme:** Aim, Crops covered, Farmers covered, Perils covered. **(5+1)**

5. Global outlook: - Agriculture insurance in important countries (US, Canada, Spain, Japan, Italy, Sri Lanka, Mexico etc.),Role of global multi-Lateral financial institutions in promoting index based crop insurance scheme (World bank, World food program, etc.), IT/ ICT tools used for creating awareness about the insurance products ,Key challenges in Crop Loss Assessment, Technology Solutions, Unmanned Aerial Vehicles (UAVs) **(5+1)**

Suggested Textbooks:
1. Agriculture, Food Security & Rural Development, Asian Development Bank
2. Agriculture Risk & Insurance in India, Dr. S. S Raju & Dr. Ramesh Chand, NCAEPR, New Delhi, 2010, Books for Development, Bangalore
3. Adaptation to Climate Change and Insurance, Agricultural Insurance Training – Manual
4. Agricultural insurance (2006), K. N. Rao, Insurance Institute of India, Mumbai
5. Agriculture Insurance (2000), Poojari P.C., Insurance Institute of India, Mumbai
6. Agriculture Insurance (1994), Musafir, Rai

Suggested Reference Books
1. Government Support to Agricultural Insurance, Mahul, Olivier; Stutley, Charles

2. Agricultural Insurance Theory and Practice and Application to Developing Countries, P. K. Ray, Pergamon Press
3. Economics of Agricultural Crop Insurance: Theory and Evidence, Darrell L. Hueth University of Mary land William H. Furtan University of Saskatchewan, Springer- Science + Business Media, LLC
4. Knowledge Paper Released at National Conference on Accelerating Agriculture Insurance, 2018, FICCI.

Subject Core (SC) Courses - Semester III
Specialization: Human Resource Management

Semester-III		304HRM- Strategic Human Resource Management
3 Credits	LTP: 2:1:1	Subject Core (SC) Course- Human Resource Management

Course Outcome: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304HRM.1	REMEMBERING	REMEMBER the strategies adopted by HR and their implementation issues and challenges faced by the organization in national and international context.
CO304HRM.2	UNDERSTANDING	Ability to UNDERSTAND and ARTICULATE the basic concepts of SHRM and link the HR strategies to the organizational business strategies.
CO304HRM.3	APPLYING AND ANALYZING	Ability to ANALYZE HR as an investment to the company.
CO304HRM.4	EVALUATING	Ability to INTERPRET and EVALUATE the implementation of the HR strategies.
CO304HRM.5	CREATING	FORMULATE and provide realistic solutions to the industry by designing innovative strategies and logical decision making.

1. Introduction to Strategic Human Resource Management: Definition and objectives of SHRM, Evolution of SHRM, Strategic Fit, Types of HR strategies, Linking HR strategies to business strategies (7+1)
2. Components of SHRM: Human Capital management, Valuation of human resources in a strategic level, HR cost, Investments in HR, Formulation of HR strategies, Strategic HR vs traditional HR, HRM in knowledge economy, Challenges and issues in implementation of HR strategies in Indian context (9+1)
3. HR Planning as a strategy: Business Strategy & HRP, HRP process, Job Analysis, Forecasting and analyzing HR demand (qualitative and quantitative), Supply forecasting (external and internal), Comparison of demand and supply forecasting (8+1)
4. Specific HR strategies: Talent Management strategies, Career Planning and succession planning, Compensation and reward strategies, Employee engagement strategies (7+1)
5. Global Dimensions to HR strategy: SHRM in international context, Global competitive advantage, Issues and challenges in SHRM, cross cultural management- developing cross cultural sensitivity, OCTAPACE, Global business ethics (9+1)

Note:
1. Case study-based approach should be emphasized
2. Numerical approach in HR planning and HR valuation should be adopted.

Suggested Text Books:
1. Strategic Human Resource Management, (Agrawal, Tanuja), Oxford University Press
2. Strategic Human Resource Management- A General Managerial Approach, (Greer, Charles P.), Pearson Publications, Second Edition
3. Strategic Human Resource Management, (Mello, Jeffrey A.), Thomson Publications, Second Edition

Suggested Reference Books:
1. Human Resource Management- Text and Cases, (Pande, Sharan; Basak, Swapnalekha), Pearson Publication
2. Global Resource Management, (Bedi, S.P.S; Kishore, Minakshi), Wisdom Publications, 2007 Edition

3. International Human Resource Management, (Dowling, Peter J.; Welch, Denice E.), 4th Edition

Suggested Weblinks:
1. **www.shrmindia.org**
2. **www.peoplematters.com**

Journals:
1. Journal of Strategic Human Resource Management
2. International Journal of Human Resource Management
3. Human Resource Management Journal

Semester III		305HRM : HR Operations
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO315HRM.1	REMEMBERING	DESCRIBE structure of personnel department, its policies and maintenance of employee files & records
CO315HRM.2	UNDERSTANDING	LEARN drafting of communications for disciplinary actions
CO315HRM.3	APPLYING	DEMONSTRATE the knowledge and calculations of bonus, gratuity, PF, ESI etc.
CO315HRM.4	ANALYSING	EXPERIMEMT to calculate the computation of Workmen compensation, Bonus and Gratuity as per relevant acts
CO315HRM.5	EVALUATING	CALCULATE computation of Workmen compensation, Bonus and Gratuity
CO315HRM.6	CREATING	FILE returns under various labour laws and prepare salary structure

1. **Human Resource Administration:** Definition, nature, scope, objective, structure of personnel department, personnel policy and its types, maintenance of personnel files and records, Drafting communication in personnel department – Appointment, promotion, transfer, deployment, appreciation letter, notices and circulars.   **(7+2)**
2. **Communications about disciplinary measures:** Drafting of memo, warning, show cause, charge sheet, suspension, Inquiry procedure correspondence, termination and dismissal, reinstatement in service. **(4+1)**
3. **Computation under Social Security Laws:** The Employee's Provident Fund and Miscellaneous Provisions Act, 1952 – Contribution, online procedure for opening of account and required documents, rate of contribution of Employer and Employee, administrative charges, interests and penalties, PF calculations and Forms, Amendments till date,
   The Employee's State Insurance Act, 1948 – Contributions, all 6 benefits, and calculations related to benefits, calculations for payment of compensation, applicability, Amendments till date   **(7+2)**
4. **Compensation and Labour Welfare:** The Workmen's Compensation Act 1923 **–** Definition, Permanent, Partial, Total Disablement arising out of and in course of employment, theory of notional extension, calculation of compensation in case of death and disability, Amendments till date.
   The Payment of Bonus Act, 1965 – Definition of Bonus, applicability, eligibility, minimum, maximum, Set-on and Set- off, disqualification of bonus, Amendments till date.
   The Payment of Gratuity Act 1972 – Definition of Gratuity, applicability, eligibility, minimum service condition, maximum limit, calculation of gratuity in case of retirement, resignation, death and disablement. Amendments till date.   **(10+3)**

5. Components of Payroll System: Maintenance of Statutory Returns – TDS, Profession tax, Form – 16 A and B, Form 26 AS, PF, ESI, Calculation of CTC and designing salary structure Income from salaries, deductions from salaries, meaning of salary for different purposes, perquisites, value of rent free accommodation **(7+2)**

Learning Resources:

Text Books:

1. Personnel Management – C B Mamoria
2. Dynamics of Personnel Administration – Rudrabaswaraj
3. Personnel Management – Edwin Flippo
4. Industrial and Labour Laws – S. P. Jain
5. Employee Relations Management-P N Singh, Pearson Publications
6. Dynamics of Industrial Relations–Mamoria & Mamoria
7. Industrial Relations: Emerging Paradigms, BD Singh, Excel Books, 2004 Edition

Reference Books:

1. Guide on Labour Management forms and precedents (Law, Practice and Procedure) – S D Puri (Snow white publication)
2. Introduction of Labour and Industrial Laws by Avatar Singh
3. Elements of Mercantile Law by N. D. Kapoor, Sultan Chand
4. Bare Acts
5. Elements of Mercantile Law-N. D Kapoor

Websites: www.managementstudyguide.com

Journals: Journal of Industrial Relation, Human Capital, Journal of HRM

Semester III		312HRM: Talent Management
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO.312.1	REMEMBERING	DEFINE Talent Management and its significance
CO.312.2	UNDERSTANDING	UNDERSTANDING performance excellence through Talent Management
CO.312.3	APPLYING	APPLY Talent Management concepts in Human Resource Management
CO.312.4	ANALYSING	ANALYSING Talent Management practices in employee development and career enhancement
CO.312.5	EVALUATING	FORMULATE the Talent Management Strategies for any organisation.

1. **Talent Management:** Definition, Meaning of Talent Management, Objectives & Role of Talent Management in building sustainable competitive advantage to a firm, Key Processes of Talent Management, Consequences of Failure in Managing Talent, Benefits of Talent Management: How Your Business Can Benefit From it, Responsibilities of Talent Management Manager & Professionals **(6)**
2. **Talent Management Planning:** Understanding the Needs and Mind set of Employee, Steps in Talent Management Process, Knowledge, Values, Beliefs and Skill Implications for Talent Management, Modelling Excellence **(6)**
3. **Talent Acquisition:** Defining Talent Acquisition, Develop high potential employee - High performance workforce, Importance of Talent Development Process, Steps in Developing Talent, Succession Planning, Difference between Talent Acquisition and Recruitment, Current Trends in Talent Acquisition. **(6)**
4. **Talent Retention:** *"SMR Model"* (Satisfy, Motivate and Reward) – The Formula to Win Your Employees & Retain Them, Employee Retention Programs, Career Planning & Development, Return on Investment (ROI) on Talent Management, Employee Engagement, Best Practices in Employee Retention. **(6)**
5. **Opportunities and Challenges in Talent Management:** Talent Management Challenges, Strategies to Overcome the Challenges, Opportunities in Talent Management, Talent Management in the Digital Era, Current trends in Talent Management.
   Students in a group of 2-4 to study and submit spiral bound report on Talent Management Strategy in any organisation of their choice (**6**)

Suggested Text Books:
1. A Framework for Human Resource Management, Dessler Gary, Pearson, Edition: 7th
2. Fundamentals of Human Resource Management, Varkkey Biju, Dessler Gary, Pearson, Edition: 14th
3. Talent Management Hand Book, Lance A Berger, Dorothy R Berger, McGraw-Hill, Edition: 13th
4. Talent management in India: Challenges and opportunities, Hasan, M., Singh, A. K., Dhamija, Atlantic Publication,

5. A Handbook of Human Resource Management Practice, Armstrong, Michael, Kogan Page Publication
6. Human Resource Management, Pattanayak Biswajeet, PHI Learning Pvt. Ltd.

Suggested Reference Books:
1. Talent IQ, Emmet Murphy, Platinum Press,
2. Talent Management: Process of Developing & Integrating Skilled Workers, Shukla Ravinder, Global India Publications, 2009
3. Talent Management - Strategies for Success from Six Leading Companies by ASTD, ASTD, Cengage Learning
4. Strengths Based Recruitment and Development: A Practical Guide to Transforming Talent Management Strategy for Business Results., Sally Bibb
5. Talent Management, R.N. Misra, Discovery Publishing House Pvt. Ltd.

Websites:
1. https://bookboon.com/en/talent-management-a-focus-on-excellence-ebook
2. https://silversoft.co.za/wp-content/uploads/2016/05/Talent_Management_for_Dummies.pdf
3. http://www.oracle.com/us/media1/talent-retention-6-best-practices-1676595.pdf
4. https://www.teleosconsulting.com/who-we-serve-and-how/our-unique-approach/strategic-talent-alignment-2/

Semester III		313HRM : Psychometric testing and Assessment
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES (CO'S)
CO313.1	REMEMBERING	KNOW various tools of psychometry designed to measure traits of individuals
CO313.2	UNDERSTANDING	UNDERSTAND & Conduct the group simulated exercises for organizational purpose
CO313.3	APPLYING	IDENTIFY AND ADMINISTER psychometric tools to respondents
CO313.4	ANALYSING	INTERPRET results and counsel the respondent based on the results
CO313.5	CREATING	CREATE Psychometric Tests for the specific traits as required by the organization

1. Introduction: Psychological Assessment concept and definition ,Objectives & Purpose of Psychological Tests, Importance of Psychometric and Psychological Measurement. Social, Ethical and Legal Issues in Testing, Advantages and Limitations of Psychological Testing. Psychological Tests and its Characteristics – Standardization, Objectivity, Reliability, Validity, Norms. **(4+2)**

2. Different methods of assessment: Establishment of an Assessment or Testing Procedure for Industrial/Organizational Setting. Interview as Assessment Technique, Individual tests (personality and motivation tests, interpersonal tests, analytical tests, ability tests, knowledge tests), Individual exercises (case study, in-basket exercise, psychomotor exercises), Group exercises (group simulation exercises, role plays, group discussions, management games) **(2+4)**

3. Psychological Tests: Test Administration Perspective such as Computer Assisted Testing, Speed and Power Tests, Paper and Pencil Tests, Objective and Subjective Scoring. ASUFA test (Attribution of Success and Failure), MBTI (Myers and Briggs Type Indicator), Conflict Management test, Emotional Intelligence, Stress

Management and Personality Traits Tests. Students should be able to administer the test, score the test and interpret the results of the test. **(2+6)**

4. FIRO-B test & Belbin team roles test: Theory, Administration and Interpretation of the tests. **(2+2)**

5. Conduction of Simulated exercises and management games: Prisoner's Dilemma- Simulated exercise based on game theory, Broken square game based on team building, individual versus group decision making simulated exercise, hollow square game for planning versus implementation. Students should be able to conduct the game and analyze & interpret the results. **(4+2)**

Suggested Reference Books:
1. Psychometric & assessment Tests by Andrea Shavick
2. Psychometric Tests For Dummies by Liam Healy
3. Psychometric Tests, Volume 1, Testing Series, The Times testing series edited by Mike Bryon
4. HRD instruments by Dr S W Deshpande
5. Training Instruments in HRD and OD by Udai Pareek, Surabhi Purohit
6. Organisational Behaviour, Fred Luthans 10th edi.
7. Organizational Behaviour by Stephen Robbins
8. Behavioural Exercises and Games; Manual for Trainers by Madhu Deshpande, Prayag Mehta, Manohar Nadkarni Publication Learning Systems
9. Psychological Testing by Anne Anastasi Susana Urbina
   Links for online content:

1. https://www.psychestudy.com/social/weiner-attribution-theory

Semester III		314 HRM : HR Perspectives in Mergers & Acquisitions
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO314HRM.1	REMEMBERING	LIST conceptual framework of Mergers & Acquisitions and organization integration
CO314HRM.2	UNDERSTANDING	UNDERSTAND HR's role and due diligence process in Mergers & Acquisitions
CO314HRM.3	APPLYING	MANAGE/ SOLVE HR issues arising out during Mergers & Acquisitions
CO314HRM.4	ANALYSING	ORGANIZE HR due diligence before M & A
CO314HRM.5	EVALUATING	SUPPORT process of change management in M & A
CO314HRM.6	CREATING	FORMULATE HR processes for restructuring compensation and benefits in Mergers & Acquisitions

1. **Conceptual Framework:** Concepts of M&A, Organizational Growth through M&A, M&A in historical perspective, The Indian Scenario of M&A, An overview of HR contributions towards M&A, Govt. perspective / Legal requirements to be followed in Mergers and Acquisitions.

   (4+2)

2. **Role of HR in Mergers and Acquisitions** Role of HR in Pre and Post Mergers and Acquisitions, Different Phases of Mergers and Acquisitions. HR's Role in doing Human Due diligence before initiating Mergers and Acquisitions.

   (4+2)

3. **HR Issues in M&A:** Attracting and retaining high performers, Utilizing and managing excess manpower, Establishing of continuity and integration of culture, Managing insecurity and stress, Managing Workplace Diversity in Mergers and Acquisitions

(4+2)

4. **Restructuring HR processes in M&A:** Performance Management System Re-designing after Mergers, Re-looking into Compensation for balancing organizational systems and process, Benefits and Reward Management Practices restructuring after mergers and acquisitions

(4+2)

5. **Leveraging HR Competencies in M&A:** Managing Stress in Mergers and Acquisitions by learning stress management techniques, Managing Change in Mergers and Acquisitions by becoming a change agent, Acquiring HR Competencies for handling smooth transition of the organization during Mergers and Acquisitions

(4+2)

Learning Resources:

Text Books:
1. Mergers, Acquisitions and Corporate Restructuring – Nishikant Jha – Himalaya Publishing House
2. Human Resource Management in Mergers and Acquisitions: Theories and Practices - by Dipak Kumar Bhattacharyya – Cengage Learning
3. Mergers, acquisitions and business valuations – Ravindhar Vadapalli – Excel Books

Semester III		315HRM : International HR
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO315HRM.1	REMEMBERING	IDENTIFY key perspectives of global workforce management
CO315HRM.2	UNDERSTANDING	UNDERSTAND cultural aspects of International HRM
CO315HRM.3	APPLYING	PREPARE HR planning for long term global staffing
CO315HRM.4	ANALYSING	ILLUSTRATE steps involved in global selection of human resources
CO315HRM.5	EVALUATING	FORMULATE Training and development policy for expatriate employees of an organization
CO315HRM.6	CREATING	ANALYZE / COMPARE important points that needs to be included while drafting global workforce performance & development management system of an organization

1. Introduction and Overview of International HR: Global Market Context-Key Perspective in Global Workforce Management - Cultural Foundations of International Human Resource Management- Changes and challenges in the Global Labor Market- Globalization Technological Advancement- change in labour force Demographics and Migration-Emerging on the contingent workforce- Offshore sourcing- global workforce Management challenges, Concepts of Host Country Nationals HCN's, Parent Country Nationals PCN's and Third Country Nationals TCN's in International Business. **(4+2)**

2. The role of International HRM in Successful MNC: Knowledge Transfer-Global Leadership training and Development-Strategic Control Needs-Competitive strategy of Multinational corporations-Structuring for Optimal global Performances- Understanding culture-Major models of National Culture- Linking Human Resource management practices to Competitive Strategy and Organization Structure-Paradigm Shift of international Human Resource Management form contingency model to Process Development. **(4+2)**

3. Global Human Resource Planning: From strategy to Decision about work Demand and labour supply External Environment Scanning- Job Design for Meeting global Strategy work demand HR planning for the Long term-Global Staffing: General Actors Affecting Global Staffing-Global Recruitment of Human Resources-Global selection of Human Resources.   **(4+2)**

4. Training and development of Global employees: Strategic role of Training and Development in the global Market Place- Fundamental concepts and principles for Guiding global Training and Development- Training imperative for the global workforce- Managing International Assignments-Expatriate Preparation, Foreign Assignment an Repatriation-International Assignments considerations for Special Expatriates-New and Flexible International Assignments. **(4+2)**

5. Global workforce performance Management: Performing Management Process-Important consideration for Global Performance Management-Planning and Implementing Global Performance Appraisal- Compensation for a Global workforce- Managing Compensation on a global Scale: Fundamental Practices-Key compensation for Expatriates, Host Country Nationals HCN's and Third Country Nationals TCN's – Global Employee Relations- current ER issues-Influence of MNC's and Union on Global ER. **(4+2)**

Suggested Readings:
- Charles M Vance and Yongsunpaik, Managing Global Work force, PHI, 2009
- Mark E.Mendenhall, Gary R.Oddou, Gunter K.Stahl, Reading and Cases in International Human Resource Management, Routledge, Fourth Edition, 2007
- Tony Edwards and Chris Rees: International Human Resource Management, Pearson, 2009
- Nilanjan Sengupta, Mousumi S. Bhattacharya, Excel Books, 2007
- Peter Dowling, International Human Resource Management: Managing People in a Multinational Context, 5e, Thomson, 2008
- K. Ashwathappa, Sadhna Dash, International Human Resource Management, Tata Mc Graw Hill, 2008
- S. K. Bhatia, International Human Resource Management, Deep & Deep Publications, 2005

Sem- III		316 HRM: Mentoring and Coaching
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course-Human Resource Management

Course Outcomes: At the end of this course the learner shall be able to –

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316HRM.1	Remembering	ENUMERATE various concepts of Mentoring and Coaching.
CO316HRM.2	Understanding	UNDERSTAND techniques of Mentoring and Coaching
CO316HRM.3	Applying	APPLY models of Mentoring and Coaching to real world scenarios
CO316HRM.4	Analyzing	ANALYSE issues in Mentoring and Coaching

CO316HRM.5	Evaluating & Creating	DEVELOP skills needed to become Mentor, Coach

1 Foundation of Mentoring: Meaning of mentoring, Need and benefit of mentoring, Characteristics of effective mentor, Process of mentoring, Ethical issues, and barriers in mentoring (Personal, Organization, and Environmental), Creating coaching mentoring culture (4+2)

2 Foundation of Coaching: Meaning of coaching, Need and benefit of coaching, Principles of Coaching, Process of coaching, Difference between coaching and mentoring, Ethical issues and barriers to coaching (3+2)

3 Models and Approaches: GROW model, CLEAR and PRACTICE model, FUEL Model, Kolbs experiential learning model. Types of Mentoring-Partner model/one to one mentoring, Distance/Virtual mentoring, Group mentoring , Approaches to coaching- Cognitive behavioral coaching, solution and goal focused coaching, Narrative coaching, Alignment coaching, Positive psychology and strength coaching, systems coaching, life coaching. (5+2)

4 Skills and Techniques of Coaching and Mentoring: Core Skills- Trust, Rapport**,** Observation**,** Listening, Questioning, Supporting. Techniques- Building trust, Active listening, Asking open-ended questions, Effective goal-setting, encouraging an outcome focus, giving constructive feedback, Strengths-spotting. (4+2)

5 Practical Application/ Implementation: Mentoring and coaching related Mini project by a team of 2-4 students and Case studies related to Mentoring and Coaching in Manufacturing sector and Service sector. (4 cases) (4+2)

Suggested Text Books
1. Coaching & Mentoring by Jane Renton, Profile Books Ltd.
2. Coaching, Mentoring and Managing, A coach guidebook by Micki Holliday, The Career Press, Inc.
3. Coaching and Mentoring by Nigel MacLennan, Routledge
4. Coaching and Mentoring for Business by Grace McCarthy, Sage Publication
5. Techniques for Coaching and Mentoring by David Megginson & David Clutterbuck
6. 50 Activities for Coaching/Mentoring by Donna Berry, Charles Cadwell, Joe Fehrmann, HRD Press Inc

Reference Books:
1. Coaching and Mentoring, Harvard Business School Press
2. Making Mentoring Happen by Kathy Lace, Business & Professional Publishing Pvt. Ltd.
3. Coaching, Counseling & Mentoring by Florence M. Stone, AMACOM, 1601 Broadway, New York.
4. Coaching and Mentoring Theory and Practice by Robert Garvey, Paul stokes, David Megginson, Sage Publication

Websites :
www.coachingnetwork.org.uk
http://www.tobincls.com/mentoring.htm
http://www.coachingandmentoring.com/Articles/mentoring.html
https://positivepsychology.com/coaching-skills-techniques/
https://clevermemo.com/blog/en/effective-coaching-techniques/
http://www.ufba.org.nz/images/documents/2015_UFBA_Workshop_Coaching_and_Mentoring_Skills.pdf
https://my.lerner.udel.edu/wpcontent/uploads/Skills_for_Sucessful_Mentoring.pdf

Semester III		**317 HRM : Compensation and Reward Management**
2 Credits	**LTP: 0:3:1**	**Subject Elective (SE) Course – Human Resource Management**
Course Outcomes: On successful completion of the course the learner will be able to:		

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO317HRM.1	REMEMBERING	DESCRIBE concept of compensation and cost

CO317HRM.2	UNDERSTANDING	UNDERSTAND compensation and reward management process
CO317HRM.3	APPLYING	COMPARE issues related to compensation and survey of wages & salary administration in various industries
CO317HRM.4	ANALYSING	EXPERIMEMT to calculate various types of monetary and profit sharing incentives
CO317HRM.5	EVALUATING	CALCULATE income tax as per the current slabs for the employees under different salary brackets
CO317HRM.6	CREATING	FORMULATE salary structure incorporating tax saving components.

1. **Compensation, costs and systems:** Concept of compensation and cost, advantages of fair compensation system, compensation policy, elements of cost, cost associated with personnel functions & causes of labour turnover. Direct & Indirect labour, cost control techniques, role of various departments & types of worker. Compensation and reward management process, components of remuneration, aspects of reward management and merits and demerits of various compensation systems.
   (4+2)

2. **Wage and salary administration:** Definition and concepts, wage surveys, components of wages, theories of wages, wage differentials, and executive compensation plans. Wage fixation methods and its norms, applicability as per various legislation and its provisions. Elements of management compensation, salary surveys, job evaluation & its objectives.   **(4+2)**

3. **Comparisons of compensation surveys in various industries:**
   Issues related to compensation and survey of wages & salary administration in manufacturing industry.
   Issues related to compensation & survey of wages & salary administration in banking & service sector.
   Issues related to compensation and survey of wages & salary administration in IT & ITES industry.
   Issues related to compensation and survey of wages & salary administration in Infrastructure industry. **(4+2)**

4. **Incentives, reward system & pay restructuring:** Meaning and determinants of incentives, wage incentives, types & forms of profit sharing, non-monetary incentives & cafeteria-style compensation. Incentive calculation process, possible inputs and outputs of incentive process, preparation of payroll/wage sheets incorporating incentive payments, disbursement and internal checks, types of non-monitory incentives and rewards, retention bonus etc. designing salary structure for startup organizations incorporating rewards and incentives .
   (4+2)

5. **Tax planning and payroll components:** Income from salaries, deductions from salaries, meaning of salary for different purposes, perquisites, value of rent free accommodation. Tax planning and pay structure of today and tomorrow, compensation structure, role of compensation and rewards in modern organization, tax planning and payroll components, how to save income tax.
   (4+2)

Learning Resources:

Text Books:
1. Compensation & Reward Management, BD Singh, Excel Books
2. Compensation, Milkovich & Newman, Tata McGraw Hill

Reference Books:
1. Strategic Compensation, Joseph J. Martocchio, 3rd Edition, Pearson Education
2. Compensation Management in a Knowledge based world, Richard I. Anderson, 10th edition, Pearson Education
3. Compensation Management, Er Soni Shyam Singh, Excel Books.

Websites: www.vtu.ac.in

Semester		318 HRM : Performance Management System
2 Credits	LTP: 2: 1: 1	Subject Core (SC)- Human resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO #	COGNITIVE ABILITIES	COURSE OUTCOMES
CO HRM.1	REMEMBERING	DESCRIBE key components and applicability of theories of Performance Management System
CO318 HRM.2	UNDERSTANDING	DEMONSTRATE the communication skills required when managing achievement and underachievement.
CO318 HRM.3	APPLYING	IDENTIFY factors affecting Performance Measurement
CO318 HRM.4	ANALYSING	ANALYZE various tools for performance assessment
CO318 HRM.5	EVALUATING	COMPARE various organizational performance management systems and best practices.
CO318 HRM.6	CREATING	DESIGN a performance management process for an organization.

1. **Introduction and Theoretical Framework:** Dimensions of Performance, Performance Appraisal & Potential Appraisal, Methods of Performance Appraisal: Traditional, Modern Methods, Components of PMS. Performance Management: Planning Performance for Role Clarity, Accountability and Effectiveness. Goal Theory and its Application in Performance Management, Control Theory and its Application in Performance Management, Social Cognitive Theory and its Application in Performance Management. (6 +3).

2. **Process of Performance Management**: Overview and Importance of Performance Management Process, Performance Management planning process, Setting objectives - Organizational and individual performance plans - Components of Manager's performance and development plan - setting mutual expectations and performance criteria. Mid-cycle Review Process and End-cycle Review Process. (6 +3)

3. **Performance Measurement**: Determinants of performance measurement, performance dimensions, approaches to measuring performance, diagnosing the causes of poor performance, choosing a performance measurement approach. Measuring results and behaviours, gathering performance information, implementing performance management system. (5 +3).

4. **Performance Management & Reward Systems:** Performance linked remuneration system, Types of Rewards, Designing Reward System, Total Reward Strategies, Characteristics of an Effective Performance Reward Plan. Performance Analysis, Performance Review Discussion, Using Performance Management Systems Data for HR Decisions, Performance Improvements and Performance Management Skills. (6 +3)

5. **Performance Management and Personal Development Plans**: 360 degree feedback as a developmental tool, performance linked career planning & promotion policy, Competency Mapping as a Performance Management Tool, Balanced Scorecard and its Applications, Mentoring System, Assessment Centres, role of technology in PMS, Performance Management Practices Of Different Companies (One example of National and International Company each). (7 +3)

Suggested Text Books:
1. Performance Management: The New Realities by Michael Armstrong & Angela Baron, Jaico Publishing House, New Delhi, 2002
2. Appraising and Developing Managerial Performance by TV Rao Learning Systems Pvt. Limited, Excel Books, 2003
3. Performance Management, Systems and Strategies by Bhattacharyya, Dipak Kumar. 1/e; New Delhi: Pearson, 2011

Suggested Reference Books:
1. Corporate Performance Management by David Wade and Ronad Recardo, Butter Heinemann, New Delhi, 2002.
2. Performance Management by A.S. Kolhi & T. Deb,
3. Performance Management Systems by A.M. Sharma
4. Performance Management: Toward Organizational Excellence by T. V. Rao (2016)
5. Prem Chadha (2011). Performance Management, 1/e; New Delhi: McMillan
6. Henderson : Compensation Management in a Knowledge Based World 9/e Pearson Education.

Web links:

1.www.managementstudyguide.com

2.www.shrm.org

3. www.whatishumanresource.com

4. www.valamis.com

5. www.wayshrconsulting.com

Semester IV		319 HRM -: Change Management & new technologies in HRM
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES (CO'S)
CO. HRM .1	REMEMBERING	DEFINE Change Management and its significance
CO. HRM .2	UNDERSTANDING	UNDERSTANDING change management model and practices
CO. HRM .3	APPLYING	APPLY Change Management in context to digital transformation
CO. HRM .4	ANALYSING & EVALUATING	EXAMINE and DETERMINE various concepts in human resource information system
CO. HRM .5	CREATING	IMPLEMENT change management in the organization.

1. Introduction to Change Management: Definition- change, how people experience change?, change as a natural process, Seven phases of change, types of change, importance and causes of change- social, economic, technological, organizational, Change Management Process , strategies to implement change in organization. **(5)**

2. **Model of Change Management**: ADKAR change management model, principle of change management, 7 R's of change management, challenges in change management, best practices in change management, how to adapt change during disaster. **(6)**

3. Change Management and Digital Transformation: Meaning - digital transformation, elements of digital transformation, stages of digital change management, management strategies for digital transformation, current trends in change management in context to digital transformation. **(6)**

4. Human Resource Information Systems: Information Security and Privacy in Human Resource Information Systems, The Future of Human Resource Information Systems: Emerging Trends in Human Resource Management and Information Technology **(7)**

5. Executing Change: Challenges of execution, Why does change Succeed / Fail? Minimum two case studies one each of successful execution and one of failure. **(6)**

Suggested Text Books:

1. Change Management by Andrew Pettigrew and Richard Whipp Infinity Books
2. Human Resource Information Systems- Basics, Application, Future and Direction by Dr. Michael Kavanagh and Dr. Mohan Thite
3. Suggested Reference Books:
4. Change and Knowledge Management by B. Janakiram, P. V. Ravendra,Shubha Murlidhar Published by biztantra
5. Change Management by Robert a Paton and James McCalman, Sage Publication, 3rd Edition
6. Human Resource Information System by P. K. Gupta and Sushil Chaabra.

Websites:

1. www.changedynamix.com
2. www.oursouthwest.com/SusBus/mggchange.html
3. http://smallbusiness.chron.com/advantages-disadvantages-human-resourceinformation-system-2107.html
4. www.cmswire.com/digital-workplace/change-management-the-key-to-successful-digital-transformations
5. www.a-connect.com/knowledge/change-management-in-times-of-disruption-and-digital-transformation

Journals:

1. Journal of Organizational Change Management
2. International Journal of Human Resource Management
3. International Journal of Human Resource Management
4. Human Resource Management Journal
5. Human Resource Management

Subject Core (SC) Courses - Semester IV
Specialization: Human Resource Management

Semester IV		403 HRM - Organizational Diagnosis & Development
Credits: 3	LTP: 2:1:1	Subject Core – Human Resource Management – 05

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404.1	REMEMBERING	DESCRIBE the major theories, concepts, terms, models tools and frameworks in the field of Organizational Diagnosis & Development.
CO404.2	UNDERSTANDING	UNDERSTAND concept of OD and 'intervention'.
CO404.3	APPLYING	MAKE USE of the Theories, Models, Principles and Frameworks of Organizational Diagnosis & Development in specific organizational settings.
CO404.4	ANALYSING	ANALYZE the external and internal environment with right tool of diagnosis and review the role of consultant in OD.
CO404.5	EVALUATING	IDENTIFY AND MAP an intervention to organisational need
CO404.6	CREATING	DESIGN the role of the consultant for an organisational issue

1. **Organisational Development:** Definition of Organisational Development, Evolution: Robert Tannenbaum, Kurt Lewin, McGregor, Herbert Shepard, Robert Blake, Foundation of OD- T-Group, System's theory, Parallel learning structure, double loop learning, Action Research. (5+2)

2. **Organisational diagnosis**- Six Box model and the Martin Weisbord's questionnaire, Porter's five forces model, PESTEL (Political, Economic, Social, Technological, Environmental, Legal) analysis of macro-environment. (4+2)

3. **Team interventions and Intergroup interventions**- Concept of intervention, types of interventions(team, intergroup, comprehensive, structural), Team Interventions: Formal group diagnostic meeting, formal group teambuilding meeting, process consultation, gestalt approach, Role analysis technique, role negotiation, interdependency exercise, appreciations and concerns, responsibility charting. Intergroup and third party peace-making interventions- Walton's approach, organisation mirror, partnering. (12+2)

4. **Comprehensive interventions and structural interventions**- Comprehensive interventions : Beckhard's confrontation meeting, survey feedback, appreciative inquiry, Grid OD. Structural interventions- socio-technical systems, work redesign, quality circles, re-engineering. (10+2)

5. **OD consultant**: Meaning, role and responsibilities, importance of an OD consultant. Client consultant relationship process and major challenges . (4+2)

Suggested Reference Books
1. Organisation Development- French and Bell
2. Organizational Diagnosis & Development – Dr. Anand Dadas & Dr. Rajendra Subnis (Himalaya Publications)
3. Organisation Development and Change- Cummings and Worley
4. Organisation Development-S. Ramanarayan, T.V. Rao, Kuldeep Singh.
5. Competitive Strategy: Techniques for Analyzing Industries and Competitors- Michael E. Porter
6. Strategic Management and Business Policy- C Appa Rao, B Parvathiswara Rao, K Sivaramakrishna

Semester – IV		404 HRM: Current Trends & Cases in Human Resource Management
3 Credits	LTP: 2:1:1	Subject Core (SC) Course –Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404HRM.1	REMEMBERING	**DESCRIBE** the conceptual framework of Digital Disruptions and its impact on the current HR Trends.
CO404HRM.2	UNDERSTANDING	**SUMMARIZE** the impact of Current HR trends on HR Functions
CO404HRM.3	APPLYING	**ILLUSTRATE** value creation & competitive advantage of Technology on current HR Trends
CO404HRM.4	ANALYSING	**EXAMINE** the changing role of HR Priorities
CO404HRM.5	EVALUATING	**ELABORATE** upon the various types of current HR Trends
CO404HRM.6	CREATING	**APPLY** the existing Tech tools to real time HRM Challenges and offer Solutions.

1. **Introduction and Concept of HR Trends:** Definition and Concept related to HR Trends, Comparative analysis of HR Trends since 2015, Causes of transformation and evolution in the HR Trends, Digital Disruptions and its impact on HR Trends.**(6+3)**
2. **Current HR Trends:** Technological Interventions in HR Processes and Management (Artificial Intelligence in Recruitment, Data Analytics in transforming HR, Employee Experience Platforms, Feedback Tools to improve Employee Engagement and Productivity, Employee Wellness Apps, Cloud and Mobile-enabled HR solutions) **(7+3)**
3. **Tectonic Shift in HRM Priorities** viz: Managing Workforce Diversity, Establishing Gender Parity and Pay Equality, Providing Mentorship, Assuring Safety at workplace, Catering to Employee expectations, Changing Skill requirements, Conducting Continuous Improvement Programs, Re-engineering work processes for improved productivity, Decentralizing work sites, and Promoting Family work life balance. **(6+3)**
4. **Enhancement of HR Functions through Current HR Trends:** Organisational Culture and Effectiveness, Employee Performance and Satisfaction, Human Resource Planning & Management, Recruitment & Selection, Performance Management System, Training & Development, Career / Succession Planning, Rewards & Recognitions, Employee Engagement, Health & Safety, Administrative Functions.**(5+3)**
5. **Cases in HRM: (5+3)**
   a. Automation and Recruitment
   b. Technology enabled Employee Training and Development
   c. Employee Experience, Engagement and Evaluation through Technology
   d. Digital Human Resource Planning & Management.
   e. Tech Tools in Organisational Culture and Effectiveness.

   Suggested Text Books:
   1. Current Trends In Human Resource Management Paperback – July 5, 2017 Preeti Surkutwar (Author)
   2. Future of Human Resource Management: Case Studies with Strategic Approach, Raman Preet
   3. Digital India- Reflections and Practice, Editors: Kar, Arpan Kumar, Sinha, Shuchi, Gupta, M. P. (Eds.)

   Suggested Reference Books:
   1. Global Trends in Human Resource Management: A Twenty-Year Analysis 1st Edition, by Edward Lawler III (Author), John Boudreau
   2. The Power of People: Learn How Successful Organizations Use Workforce Analytics to Improve Business Performance, By: Nigel Guenole, Jonathan Ferrar & Sheri Feinzig
   3. HR from the Outside In: Six Competencies for the Future of Human Resources By: Dave Ulrich, Jon Younger, Wayne Brock-bank and Mike Ulrich
   4. HR Disrupted: It's Time for Something Different, By: Lucy Adams

5. Fundamentals of Human Resource Management: People, Data, and Analytics Paperback – 24 January 2020by Talya Bauer (Author), Berrin Erdogan (Author), David Caughlin (Author), Donald Truxillo (Author)

Suggested Websites:
1. https://workology.com/4-hr-technology-trends-for-2050
2. https://www.researchgate.net
3. https://cdn2.hubspot.net/hubfs/3030863/Marketing%20Files/%5BMarketing%5D%20Collaterals/Multiple%20Pe%20%7C%20Multiple%20PL%20%7C%20Multiple%20UC%20%7C%20Awareness%20%7C%20eBook%20%7C%20HR%20Technology.pdf
4. https://www.i-scoop.eu/digital-transformation/hr-in-digital-transformation-2020
5. https://www2.deloitte.com/us/en/pages/tax/articles/impact-of-hr-trends-on-mobility-talent-and-reward.html
6. https://www.india-briefing.com/news/top-5-trends-indias-hr-industry-2020-19344.html
7. https://cio.economictimes.indiatimes.com/news/corporate-news/5-hr-trends-for-2020-and-beyond-technology-will-lead-and-transform/73754952
8. https://www.peoplematters.in/article/strategic-hr/the-future-of-hr-in-2020-24364
9. https://www.hrtechnologist.com/articles/digital-transformation/hr-and-cloud-computing-how-the-cloud-is-transforming-hr/
10. https://www.trustradius.com/buyer-blog/10-ways-cloud-hr-software-is-changing-the-way-hr-works

Subject Elective (SE) Courses - Semester IV
Specialization: Human Resource Management

Semester IV		409 HRM: Labour Legislation
2 Credits	LTP : 0:3:1	Subject Elective (SE) Course – Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	Cognitive Abilities	Course Outcomes
CO409.1	REMEMBERING	AWARENESS about foundation of labor legislation.
CO409.2	UNDERSTANDING	UNDERSTAND the legislation related to various labor and social laws.
CO409.3	APPLYING	APPLY formulas of specific laws and calculate.
CO409.4	ANALYSING	STUDY labor legislation and effective implementation of them through case laws.
CO409.5	EVALUATING	REVIEW AND UNDERSTAND different labor legislations and its amendments.

Unit 1: Introduction to Labour Legislation - Philosophy of Labour Laws, Labour Laws – Concept, Evolution and reign of labor laws, Objectives, classification of labor law, Process of law formation – from Bill to Act, Need, challenges & problems. International Labour Organization and International Labor Conference, Indian Constitution & Labour Legislations, Changing scenario of labour laws. (3+1)

Unit 2: Legislations Related to Wages and Compensation - The Payment of Wages Act 1936 – Definition, Responsibility for payment of wages, Fixation of wage period, Time of payment of wages, Deduction from wages, Maintenance of registers and records, Inspectors, claims and penalties.

Payment of Bonus Act, 1965 – Definitions: Accounting year, Allocable surplus, Available Surplus, Gross Profits; Computation of gross profit, Sums deductible from gross profit, Eligibility for bonus, Disqualification for bonus, Payment of Minimum and Maximum Bonus, Concept of Set-on and Set-off; Latest Amendment.   (4+2)

Unit 3: Legislation Governing Industrial Relations - Industrial employment (Stranding Order) Act 1946 – Definitions: Appellate authority, Certifying officer, Standing Order; Submission, Certification, Registration of draft standing orders; Date of operation of draft standing orders; Duration and modification of standing orders. (4+2)

Unit 4: Legislation for Labour Welfare - Payment of Gratuity Act, 1972 – Definitions: Continuous Service, Family, Superannuation; Payment of gratuity; Nomination; Recovery; Penalty; Latest Amendment

Equal remuneration Act, 1976 – Definitions: Remuneration, Same work of similar nature; Payment of remuneration at equal rates to men and women workers and other matters; Duty of employers to maintain register; Inspectors; Offences . (4+2)

Unit 5: Legislation for Social Security - Employee's Provident Funds Miscellaneous Provisions Act, 1952 – Definitions: Basic wages, Contribution; Employees Provident Funds Scheme; Contribution by employer and employee, Modification of the scheme; Inspectors; Penalties

Note: Problems on Bonus, Gratuity, PF, ESI contributions should be conducted.

Suggested Text Books:

1. Industrial and Labour Law – S.P. Jain
2. Labor Law by Malik
3. Employee Relations Management by P.N. Singh, Neeraj Kumar, Pearson Publication

Suggested Reference Books:

1. Introduction of Labour and Industrial Laws by Avatar Singh
2. Industrial Relations, Trade Unions & Labour Legislation by P.R.N.Sinha, Indu Bala Sinha, Pearson Publication
3. Elements of Mercantile Law by N.D. Kapoor, Sultan Chand
4. Bare Acts

Supplementary reading material:

APS Labor Digest

Websites:

1. www.india-laws.com
2. https://www.advocatekhoj.com/library/bareacts/
3. https://labour.gov.in/labour-law-reforms
4. www.lawsinindia.com
5. www.ilo.org

Mobile Application:

1. India – Industrial and Labor Laws

Semester IV		410HRM : Designing HR Policies
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO.410HRM.1	REMEMBERING	IDENTIFY important points to be incorporated in HR Manual
CO.410HRM.2	UNDERSTANDING	UNDERSTAND policy requirement for Recruitment & Selection process
CO.410HRM.3	APPLYING	PREPARE policies on employee benefits for an organization of your choice
CO.410HRM.4	ANALYSING	ILLUSTRATE steps involved in better employee relations & grievance handling
CO.410HRM.5	CREATING	CONSTRUCT various HR policies for an organization of your choice

1. Introduction on the Content and Use of the Manual: Introduction of company (History, Vision, Mission, Organizational Hierarchy), Objectives and Significance of HR Policies, Right to change or discontinue,

Statement of Commitment to Employees, Statement of Growth, Profit and Business plan, Employment Policies, Confidentiality of Company Information, Steps in Designing HR Policies. **(5)**

2. Recruitment and Hiring Policies: Policies for Manpower Planning, Employment Contracts/Bonds, Drafting different forms (Letters, Bonds, Contract Form, Interview Guideline Sheet, Checklist), Procedures in Administering Contracts, Wage / Salary and Benefits, Administration Policy, Rules relating to Wages / Salary and Legal Compliances, Compensation and other Benefit Policies. **(6)**

3. Employee Operational Policies: Monetary and Non-monetary benefits, Leave and vacation policy and administration with records, Policy for Employee Incurred Expenses and Reimbursement, Policy for Career Enhancement, Policy for Appraisals and Promotions, Policy for Succession Planning, Training and Development Corporate Policy, Training Contract, Training Evaluation (Related Forms).**(6)**

4. Conduct and Safety Policies: Employee Records and information (Profile, History of Employee i.e. Transfer, Promotion, Accountability, Performance, Upgradation of Skill etc.), Policy of Code of Conduct & Discipline and Rules & Administration Policies, Rules relating to company properties, Safety and Security Employee Grievances policies and procedure, Draft of Disciplinary action report, Related Provisions and Case Study (Any Grievance case). **(5)**

5. Field study/ Desk Research: Student are expected to design HR manual for any company and develop various statutory forms (Submit spiral bound copy as a project for 25 marks - Wherever Possible real time or for model organization) (**8**)

Suggested Text Books:
1. How to Develop Essential HR Policies and Procedures, by John H. McConnell Amacom, Div American Mgmt. Association, Volume 1Human Resource Management, Deepak Bhattacharya, Sage Publishing Ltd.
2. Florida Employment Law Manual (HR Compliance Library) Paperback – Import, 22 Mar 2016by Jennifer Saltz Bullock (Author), Jeff O'Connell (Editor)
3. The: An Indispensable Guide for Managers and Human Resources Professionals by S. Smith, R. Mazin
4. Human Resource Management: Gary Dessler
5. Guide on Labour & Human Resources, Management Forms & Precedents (Law Practice &Procedure), Snow White.
6. Human Resource Policies and Procedures for Nonprofit Organizations by Carol L. Barbeito, John Wiley & Sons, 2004.

Reference Books:
1. How to Develop Essential HR Policies and Procedures, by John H. McConnell Amacom, Div American Mgmt. Association, Volume 1
2. Guide on Labour & Human Resources, Management Forms & Precedents (Law Practice & Procedure), Snow white
3. Human Resource Policies and Procedures for Non-profit Organizations by Carol L. Barbeito, John Wiley & Sons, 2004

Websites:
5. http://www.chillibreeze.com/articles_various/HR-policies-in-India.asp.
6. http://toostep.com/debate/are-hr-policies-of-indian-companies-employee-friendly.
7. https://en.wikipedia.org/wiki/Human_resource_policies#Development, human_resource_policies.pdf
8. https://www.hrhelpboard.com/hr-policies.htm

9. https://vpsc.vic.gov.au/html-resources/how-positive-is-your-work-environment/6-human-resource-policies-and-strategies/
   Journals:
1. International Journal of Human Resource Management
2. Human Resource Management Journal

Semester IV		411: Labour Economics and Costing
2 Credits	LTP: 0:3:1	Generic Elective – Institute Level

Course Outcome: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO411.1	REMEMBERING	IDENTIFY the basic concepts of Labour Economics, Wage Determination, Labour Productivity and Costing.
CO411.2	UNDERSTANDING	UNDERSTANDING the Labour Markers in India with reference to demand and supply of Labour and Social Security Problems associated to it.
CO411.3	APPICATION	DETERMINATION of various Wage and Non-Wage Factors applicable in various sectors of businesses.
CO411.4	ANALYSIS	IMPLEMENTATION of various theories of wage determination in various business sectors.
CO411.5	EVALUATION	EVALUATION of Labour Cost Benefit Analysis of important HR functions.
CO411.6	CREATION	APPLICATION of social security of labours in various sectors.

1. **Introduction Labour Economics**: Concept and Definition, Nature, Scope and Importance - Labour as a Unique Factor of Production - Labour Economics as a Branch of Economics - Interdisciplinary Character of Labour Economics, Rise of economic problems in Labour Management, Labour Market -Definitions, facts and trends. **(3)**

2. **Labour Demand and Supply -**Determinants of the Supply and Demand for Labour, Organized and Unorganized Labour, Demand and Supply for labour in Indian Markets, Labour Demand Elasticity- Own-wage elasticity of demand, Cross-wage elasticity of demand, Major issues of Indian labour market -Labour Absenteeism, Labour turnover, Labour Productivity, Labour Migration and mobility, Impact of technological change on Labour Markets, Globalisation and international labour demand outsourcing. **(5)**

3. **Wage Determination***:* Classical, neo-classical and bargaining theories of wage determination, Modern theory of wage determination, Concepts of minimum wage, living wage and fair wage in theory and practice, Wage determination in various sectors - rural, urban, organized, unorganized and in informal sectors National wage policy, Wages and Wage Boards in India, Non-wage component of labour remuneration, Non-wage labour costs – factors and its relation with wage determination. **(6)**

4. **Concept of Labour Productivity & Costing** - Measurement and Importance of Labour Productivity & its Determinants ,Causes for Low Labour Productivity and Measures to Increased Labour Productivity, Productivity and the basis of yearly pay, Productivity and the level of pay, Productivity and the sequencing of pay, Costs -Various concepts, Elements of Labour cost – Fixed Pay and Variable pay. Various Statutory Requirements related to Cost of Labour, Cost Benefit Analysis of important HR functions, Labour turnover & productivity, Productivity and wage relationship, Cases related to labour cost calculation in Indian context. **(6)**

5. **Social Security of Labour**: Concept of Social Security and its evolution; Special problems of labour- Child Labour, Female Labour, Child labour policy, Problems and policy of female workers, Structure and achievement of labour union in India. Cases related to Issues of Social Security of labours in various sectors. **(5)**

Suggested Reference Books:
1. McConnell, C.R. and S.L.Brue (1986), Contemporary Labour Economics, McGraw-Hill, New York..
2. Reylonds L., Labour Economics & Labour Relations – Prentice Hall Inc., New Jercy.
3. Sadanand P Degaonkar , Labour Cost & Accounting, Everest Publishing House.
4. Jawahar Lal & Seema Srivastava, Cost Accounting, 4th Edition, Tata McGrew Hill Publishing Company Ltd, New Delhi
5. Jhabvala, R. and R.K. Subrahmanya (Eds.) (2000), The (Unorganised Sector Work Security and Social Protection, Sage Publications, New Delhi.
6. Suman Kalyan Chakrvarthy(2018), Labour Economics, Himalaya Publishing House Private Limited.

Suggested E books:
1. Labour Economics By Stephen W. Smith
2. Fundamentals of Labor Economics By Thomas Hyclak, Geraint Johnes, Robert
3. Handbook of Labor Economics, edited by Orley Ashenfelter, David Card

Online References:
1. https://www.ilo.org/public/english/standards/relm/ilc/ilc89/pdf/rep-vi.pdf
2. https://pos.toasttab.com/blog/restaurant-labor-cost-percentage
3. https://www.accountingnotes.net/cost-accounting/labour-cost-cost-accounting/how-to-calculate-labour-cost-per-hour-per-unit-techniques-and-formula/16904
4. https://getsling.com/blog/labor-costs/
5. https://smallbusiness.chron.com/figure-out-direct-labor-cost-per-unit-76675.html

Semester IV		412HRM : Best Practices In HRM
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OBJECTIVES (CO'S)
CO.412HRM.1	REMEMBERING	DEFINE dynamic approach towards Human Resource activities and practices.
CO.412HRM.2	UNDERSTANDING	EXPLAIN theoretical framework for best practices.
CO.412HRM.3	APPLYING	IDENTIFY & CLASSIFY the practices according to the industry and sub sectors of the industry.
CO.412HRM.4	ANALYSING & EVALUATING	COMPARE and DETERMINE various skill sets required at Human Resource Section.
CO.412HRM.5	CREATING	PLAN a survey of various industry and DEVELOP a trend analysis of Human Resource Best Practices.

1. **Introduction, Definition and Meaning of various concepts in Best Practices:** Defining various terminologies related to best practices. Define Generic, Idealistic, Realistic, and Green Practices in Human Resource Management. Define and evaluate the environment for the Best Practices. **(5)**

2. **Introduction to Eightfold Path:** Eugene Bardach Theoretical Framework (policy analysis) for Best Practices.
   Eightfold Path: Define the problem-Assemble the evidence-Construct the alternatives-Select the criteria-Project the outcomes-Confront the trade-offs-Decide-Tell your story.
   Describe Generic Vulnerabilities: poor general management capacity and weaknesses inherent to the practice itself. **(6)**

3. **Identification and Classification of Best Practices:** Developing required knowledge and skills across the Human Resource Section. Classify the practices according to the industry and sub sectors of the industry. To Categorize and identify the inconsistent approach with reference to best practices in the Human Resource Sub Sections. **Cases on recent practices in HRM (6)**

4. **Skill Development:** Introduction, Concept and Definition of Knowledge, Skill, Competency. Difference between knowledge-skill-competency. Highlight and enumerate various skill sets required for Developing Best Practices in Human Resource Sections across various industry. Importance of Skills in implementation of any practices. **(5)**

5. **Construct** one mini projects in a group of 2-4 students on Emerging Trends and Best HR Practices in areas such as HR Procurement, Training and Skill Development, Reward & Recognition, All statutory provisions under the Factories Act 1948, Employee Engagement for any organizations. **(8)**

Suggested Reference Books:

6. A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving by Eugene Bardach

7. A handbook of Human Resource Management Practice by Michael Armstrong, Kogan Page

8. Handbook for Strategic HR: Best Practices in Organization Development from the OD Network by John Vogelsang, Maya Townsend, Matt Minahan et.al. Amacom Publishing

9. Developing Skills for Business Leadership by Gillian Watson, Stefanie Reissner. Second Edition Chartered Institute of Personnel Development

Supplementary Reading Material:

1. Human Resource Management: Best Practices at Marriott International - K Prashanth … IBS2003

2. Framework for developing skill standards for workplace literacy……Eunice N. Askov. Literacy Leader Fellowship Program Reports.

Websites:

1. www.digitalhrtech.com/human-resource-best-practices
2. www.process.st/hr-best-practices/
3. www.thehrpractice.in
4. www.hrmguide.in
5. www.business-standard.com

Journals:

1. International Journal of Human Resource Management.
2. Human Resource Management Journal
3. Human Resource Management

Semester		413: Employee Engagement and Ownership
2 Credits	LTP: 1:1:1	Subject Elective – Institute Level

Course Outcome: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO413.1	REMEMBERING	IDENTIFY the basic concepts of Employee Engagement and Employee Ownership.
CO413.2	UNDERSTANDING	UNDERSTANDING the various factors, models and metrics involved in Employee engagement.

CO413.3	APPICATION	DETERMINATION of various Employee Engagement Activities and types of Employee Ownership practiced in all scales of companies at various sectors
CO413.4	ANALYSIS	IMPLEMENTATION of Engagement strategies and BUILDING Engagement Culture in companies.
CO413.5	EVALUATION	EVALUATION of Employee engagement and Employee Ownership and its impact on the performance of businesses
CO413.6	CREATION	APPLICATION of Employee engagement practices and Employee Ownership at various sectors of industry.

1. Employee Engagement: Concept and Evolution ,Definition, Need, Importance, factors of employee engagement, Creating Collective Vision Mission and Goal, , Advantages from Employee Engagement, Engagement Models – Fixed Price, Time Material, Dedicated Team, Building your own workspace model. (5+1)

2. **Developing Employee Engagement**- Understanding Self Determination Theory, Identifying employee engagement outcomes, Elements in designing Employee Engagement Activities -Creating Well-Defined Job Roles, Educating Employees for Engagement, Fostering Personal Connections, Communicating Objectives and Activities for Employee Engagement ,Levels of Engagement, Building Engagement-Engagement culture, Barriers to Employee Engagement -Ineffective Communication, Ineffective Leadership, Workplace frustration.(6+1)

3. **Measuring Employee Engagement** - Stages of Employee Engagement, Ways to measure Employee Engagement, Steps to measure Employee Engagement effectively, Critical Issues in measurement of Employee engagement, Myths about Employee Engagement, Metrics to measure Employee Engagement- Feedback from employees, Relationship with colleagues, Satisfaction & Happiness, Relationship with Leaders, Career Advancement, Rewards & Recognition, Goal Coalition, Welfare and Wellness, Employee as a Branding Agent.(5+1)

4. **Employee Ownership** – Significance of Employee Ownership, Traits of Employee Ownership, Impact of Employee Ownership, Relationship of Employee Ownership with Productivity, Organizational Commitment and Retention. (4+1)

5. **Application of Employee Engagement** – Through Job Design, Role Autonomy, Organizational Citizenship and Discretionary behavior, Desk Research of various Engagement initiatives and Tools to measure Employee engagement in various sectors, Develop and Design Employee Engagement Plan.(5+1)

Suggested Books:
1. Paul L. Marciano (2010), Carrots and Sticks Don't Work: Build a Culture of Employee Engagement with ... by , McGraw Hills.
2. Scott Carbonara (2013), Manager's Guide to Employee Engagement, McGraw Hills.
3. Emma Bridger (2018), Employee Engagement: A Practical Introduction, 2nd Edition, Kogan Page Limited.
4. Bob Kelleher (2014) , Employee Engagement For Dummies, John Wiley and sons Inc.
5. Robert Postlethwaite, Jeremy Gadd, The Employee Ownership Manual, Spiramus Press Ltd.
Online References:
1. https://www.achievers.com/blog/8-elements-employee-engagement/

2. https://www.business2community.com/infographics/a-complete-guide-to-understanding-different-kinds-of-engagement-models-infographic-02156114
3. https://officevibe.com/employee-engagement-solution/guide
4. https://officevibe.com/blog/why-employee-engagement-is-hard-to-quantify
5. https://builtin.com/employee-engagement/how-to-measure-employee-engagement
6. https://snacknation.com/blog/measuring-employee-engagement/
7. https://www.zenefits.com/workest/how-small-businesses-give-employees-ownership/

Semester IV		414HRM : Leadership and Succession Planning
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course - Human Resource Management

Course Outcomes: On successful completion of the course the learner will be able to:

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES (CO'S)
CO.414HRM.1	REMEMBERING	IDENTIFY the basic concepts of leadership and succession planning.
CO.414HRM.2	UNDERSTANDING	UNDERSTANDING the modern theories and styles of leadership.
CO.414HRM.3	APPLYING	IMPLEMENTING the appropriate succession plan through leadership development
CO.414HRM.4	ANALYSING & EVALUATING	ANALYSING and EVALUATING the existing human capital.
CO.414HRM.5	CREATING	BUILDING appropriate Succession Plan required in an organization.

1. Leadership: Concept of Leadership, Styles of Leadership, Trait Approach, Contingency Leadership Approach, Contemporary Leadership, Meaning and significance of contemporary leadership, Concept of transformational leadership, Success stories of today's Global and Indian leaders **(5)**

2. Managing Succession: Need, Significance and Objectives of succession planning, The Succession Paradox, Resistance to succession planning - Employee and environmental factors, Establish a training process, Next-generation Attributes, Interests, and Abilities: Ingredients for responsible leadership, crafting the next-generation career plan, Incumbent generation leadership. **(5)**

3. Developing Leadership: Creating a vision, Analyse the strengths and weaknesses of an organisation, Organizational Design – Hierarchy and organigram , Developing the characteristics of leader - Trust, Integrity and Ethics, Power and Influence **(5)**

4. Developing Succession Plan: Prerequisites of Succession Planning, Process of Succession Planning -Identify Key Roles, Identify Competencies for Key roles, Conduct Organizational and Human Capital review, Develop Identified Human capital, Implementation of Succession and Knowledge Transfer Plans and Evaluate Effectiveness of Succession Planning, Challenges and Issues of Succession Planning. **(5)**

5. Application of Succession Planning: Case Study of Leadership related to Succession Planning, Students are expected to study minimum two leaders who set an example of succession planning. **(5)**

Suggested Text Books:

1. Organizational Behaviour by K Ashwathappa

2. Leadership Development Activities, John Adair, 2nd Edition Jaico Publication
3. Leadership Games, Stephen S Kogan, Response Books

Suggested Reference Books:

1. Understanding OB by Uday Pareek
2. The New Leaders, Daniel Goleman, Sphere Publications
3. The DNA of Leadership, Judith E Glaser, Platinum Press
4. The New Art of the Leader, William A Cohen, Viva Books
5. Strategic Leadership, John Adair, Kogan Page
6. Authentic Leadership, Warren Bennis, Wiley India Pvt. Ltd.
7. Leadership in the Era of Economic Uncertainty, Ram Charan, TMGH
8. 21 Leaders for the 21st Century, Fons Trompenaars & Charles Hampden – Turner, TMGH

Supplementary Reading Material:

1. Contemporary Leadership Theories: Enhancing the Understanding of the complexity, subjectivity and dynamic of leadership by Ingo Winkler
2. Organizational Performance in a Nutshell by Daniel M. Wentland

Websites:

1. http://papers.ssrn.com
2. http://www.nwlink.com/~donclark/leader/leadob.html

Journals:

1. Organizational Behavior and Human Decision processes
2. Journal of Organizational Behavior
3. Journal of Human Values International Studies of Management & Organization

Sem- III		HRM: e-HRM
2 Credits	LTP: 0:3:1	Subject Elective (SE) Course-Human Resource Management

Course Outcomes: At the end of this course the learner shall be able to –

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316HRM.1	Remembering	ENUMERATE fundamental concept of HRIS
CO316HRM.2	Understanding	UNDERSTAND various technology driven features that can be adapted for HRM functions
CO316HRM.3	Applying	DETERMINE impact of technology on HRM functions.
CO316HRM.4	Analyzing	ANALYSE issues regarding technology in HRM functions.
CO316HRM.5	Evaluating & Creating	DEVELOP competencies needed to adapt technology in HRM functions

1 Foundation of Human Resource information system (HRIS): HRIS- Evolution, The Role of Information Technology, Database Concepts and Applications in Human Resource Information Systems, Systems Considerations in the Design of an HRIS: Planning for Implementation, security and privacy in HRIS, emerging trend/shift of HRIS to HRMS (4+2)

2 e-Talent Management: Introduction recruitment and technology, online recruitment objectives, recruitment strategies and social networking, selection test and assessment, technology issues in selection. (3+2)

3 e-Training: Introduction, Computer Based Training, Developing effective online learning, Blended learning, Simulations, Mobile technology and training methods, technology for training administration, technologies for training support, Learning management system , choosing new technology for training methods. (5+2)

4 e-Performance Management: Performance management and payroll- typical data inputs, reports, decision support. Compensation and benefit - typical data inputs, reports, and decision support. (4+2)

5: Practical applications: Cases - Videos related to HRMS, Case studies related to use of technology in various

HRM functions ; problems and prospects of HRMS (5 cases) (4+2)

Suggested Text Books

1. Human Resource Information Systems-Basics, Application, Future and Direction by Michael Kavanagh and Mohan Thite, Richard D Johnson, Sage.

2. Training and Development, Raymond Noe Amitabh Kodwani Tata Mcgraw Hill

3. Human Resource Information System by P.K.Gupta and Sushil Chaabra

Reference Books:

1. e HRM : Digital Approaches Directions & Applications Dr. Mohan Thite, Routledge.

Subject Core (SC) Courses - Semester III	
Specialization: Operations & Supply Chain Management	

Semester III		**304 OSCM- Services Operations Management – II**
3 Credits	LTP: 2:1:1	**Subject Core (SC) Course – Operations & Supply Chain Management**

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304OSCM .1	REMEMBERING	DEFINE the key concepts in Services Operations Management.
CO304OSCM .2	UNDERSTANDING	DIFFERENRTIATE between various service strategies, service quality dimensions, and customer relationships based on life time value.
CO304OSCM .3	APPLYING	IDENTIFY the sources of value in a service supply relationship & three factors that drive profitability for a professional service firm
CO304OSCM .4	ANALYSING	CATEGORIZE a service firm according to its stage of competitiveness.
CO304OSCM .5	EVALUATING	MODIFY the Service strategies of an organization for achieving the strategic service vision.
CO304OSCM .6	CREATING	SOLVE the relevant numerical in the scope of the subject.

1. **Service Strategy**: Strategic Service Vision, Competitive Environment of Services, Competitive Service Strategies. Overall Cost Leadership, Differentiation & Focus approaches. Winning Customers in the Marketplace - Qualifiers, Service Winners & Service Losers. The Competitive Role of Information in Services. Creation of Barriers to Entry, Revenue Generation, Database Asset, Productivity Enhancement, The Virtual Value Chain, First Stage (New Processes), Second Stage (New Knowledge), Third Stage (New Products), Fourth Stage (New Relationships) . (7+2)

2. **Service Quality**: Defining Service Quality, Dimensions of Service Quality, Gaps in Service Quality, Measuring Service Quality, SERVQUAL. Quality Service by Design, Incorporation of Quality in the Service Package, Poka-Yoke (Fail-safe), Quality Function Deployment, Walk-Through Audit, Designing a Walk-Through Audit, The Walk-Through Audit as a Diagnostic Instrument. Cost of Quality, Unconditional Service Guarantee. Service Recovery, Approaches to Service Recovery, Complaint Handling Policy. Overview of Numerical on Control Chart for Variables (X-chart and R-chart), Control Chart for Attributes (p-chart). (7+2)

3. **Service Supply Relationships**: Supply Chain Management, Network Model, Managing Uncertainty, Service Supply Relationships, Customer-Supplier Duality, Service Supply Relationships Are Hubs, Not Chains, Service Capacity Is Analogous to Inventory, Customer Supplied Inputs, Managing Service Relationships, Bidirectional Optimization, Productive Capacity, Perishability. Professional Service Firms, Attributes of Professional Services, Operational Characteristics, Outsourcing Services, Benefits and Risks of Outsourcing Services, Classification of Business Services, Managerial Considerations with Service Outsourcing. (7+2)

4. **Service Design Principles**: Basics of Service Design , Holistic service design, service design and overall business change, Scope and flow of service design, Value to the business, Comprehensive and integrated service design, The four Ps, Service composition, Setting direction, policy and strategy for IT services, Optimizing design performance, Service design goals, Balanced design , Identifying service requirement , Designing measurement methods and metrics. (7+2)

5. Customer in service industry: Buyer characteristics, buyer decision-making process (EKB model), customer involvement in service process, customer behaviour in service settings. Relationship marketing, evolution of relationship marketing, degree of relationship building, the importance of customer retention, enhancement of internal and external relationship change. 7-S Framework, determining the value of customer, lifetime value of customer, customer relationship management strategies, customer delight and customer loyalty. Case study on Axis Bank. (7+2)

Suggested Text Books:
1. Successful Service Operations Management, Metter, King–Metters, Pulliman& Walton, Thomson India
2. Services Business Management, Dr Abhay Kulkarni and Dr Sudhir Hasamnis, Himalaya Publication
3. Services Marketing Operations and Management, Vinnie J Juhari, Kirti Dutta, Oxford University Press
4. Service Management, Fitzsimmons and Fitzsimmons, Irwin/McGraw-Hill

Suggested Reference Books:
1. Service operations management - Improving service delivery, Robert Johnston, Graham Clark, Pearson Publication
2. Services Sector Management An Indian Perspective, C. Bhattacharjee
3. Baldrige – Just What the Doctor Ordered, Quality Progress, Nelson

Semester III		305 OSCM - Logistics Management
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO305OSCM.1	REMEMBERING	DEFINE basic terms and concepts related to Logistics management.
CO305OSCM.2	UNDERSTANDING	EXPLAIN the infrastructure of logistics, its linkage with various types of communication modes.
CO305OSCM.3	APPLYING	DESCRIBE the various dimensions of logistics management and transport, their inter-linkages with different types of freights.
CO305OSCM.4	ANALYSING	CALCULATE logistic costs and various classification methods of reducing the cost. Involving the information technology and its impacts.
CO305OSCM.5	EVALUATING	OUTLINE a typical logistic framework and services. ILLUSTRATE the linkages with its dynamic storage system / Customer Issues, Logistic and Business Issues in a real world context.
CO305OSCM.6	CREATING	DISCUSS modern real world logistical systems using the various concepts in the syllabus.

1. **The Principles of Logistics**: Definitions and Significance of Logistics. Logistical System of Services Elements of Logistics**,** Distinction between Procurement Logistics, Production Logistics and Distribution Logistics, Service Level, Logistics and Corporate Strategy, Supply Chains and Networks.(7+2)

2. **Logistics Systems:** Logistical Infrastructure, Basic Terminology, Types and Functions, Transport Infrastructure and Superstructure, Transport Routes and Transport Networks, Logistics Real Estate, Logistics Parks, and Freight Villages, Information Infrastructure and Communication Infrastructure, Telecommunication Infrastructure, Satellite Systems and Satellite Navigation. (8+2)

3. **Transport Systems and Logistics Services:** Transport Basics, Significance and Development, Modes of Transport and Transport Technologies, Transport Value and Transport Affinity, Road Freight Transport, Rail Freight Transport, Sea Freight Transport, Inland Waterway Transport, Air Freight Transports, Pipeline Transport. (8+2)

4. **Logistics Service Providers**: Carriers and Forwarders, Courier, Express Parcel and Mail Service Providers, Systems Service Providers and Contract Logistics Providers. IT in Logistics, Communication Standards, Identification Standards, Classification of IT in the Fields of Inventory and Warehousing. (7+2)

5. **Warehousing, Handling, and Picking Systems:** Warehousing, Handling, and Picking Systems, Warehousing Basics, Storage Facilities, Static Storage Systems, Dynamic Storage Systems, Conveyors, Discontinuous Conveyors, Continuous Conveyors, Sorters, Packages, Loading Units, and Load Carriers, Picking and Handling, Warehouse Organization, Inventory, Stock and Provisioning Management. (5+2)

Suggested Text Books:
1. Logistics, by Harald Gleissner and J Christian Femerling
2. Lean Supply Chain and Logistics Management, by Paul Myerson
3. Supply chain logistics management, By Bowersox

Suggested Reference Books:
1. Supply Chain Logistics Management, Donald Bowersox, David Closs, M Bixby Cooper, Tata McGraw Hill.
2. Introduction to Materials Management, J.R. Tony Arnold, Stephen Chapman, Ramakrishnan, Pearson.
3. Supply Chain and Logistics Management: Concepts, Methodologies, Tools, and Applications, by Information Resources Management Association, US.

Subject Elective (SE) Courses - Semester III
Subject Elective (SE) Courses - Semester III **Specialization: Operations & Supply Chain Management**

Semester III		312 OSCM- Manufacturing Resource Planning
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO312OSCM.1	REMEMBERING	DEFINE basic terms and concepts related to MRP II.
CO312OSCM.2	UNDERSTANDING	DESCRIBE the integrated planning structure and functions incorporated within MRP.
CO312OSCM.3	APPLYING	ILLUSRATE the importance of MRP as a top-management planning tool
CO312OSCM.4	ANALYSING	IDENTIFY the vertical and horizontal cross-functional integration within the MRP II planning hierarchy.
CO312OSCM.5	EVALUATING	EXPLAIN how what-if simulation, modeling, and analysis are used to produce feasible plans.
CO312OSCM.6	CREATING	DISCUSS how MRP supports the company's cost, quality, and delivery operating objectives.

1. **Master Production Scheduling (MPS):** Introduction to MPS, Need, objectives & functions of MPS, Role of MPS in management- as a "Link between strategic and tactical planning". Logical flow of materials in different manufacturing scenarios (VAT Analysis), Planning horizons and Time periods (Buckets) of MPS, Order management in MPS, Safety and hedges, Projected Available Balance (PAB) and Available To Promise (ATP), Time Fences & effect of changing MPS decisions on time fences, Final Assembly Schedule (FAS). (5+1)

2. **Material Requirements Planning (MRP-I):** Introduction to MRP-I, Roles & functions of MRP-I, Independent & Dependent Demand, Bill of Materials (BOM), Types of BOM, Numerical Problems on BOM, Lot-sizing, MRP-I as Input & Output Process, MRP-I Spreadsheet problem, Pegging reports & where-used files. (5+1)

3. **Capacity Management:** Introduction to 'Capacity' and 'Capacity management', Capacity Expansion Strategies, Capacity Planning levels vis-à-vis Manufacturing planning levels, Capacity measurement, Rough Cut Capacity Planning (RCCP), Capacity Requirement Planning (CRP), Shop Calendar, Scheduling strategies- Backward & Forward scheduling, Infinite & Finite loading, Production smoothing policies. (5+1)

4. **Manufacturing Resource Planning (MRP-II)- (Module-I):** Introduction to MRPII, Roles & functions of MRP-II, MRP-II framework, Information flow in MRP-II, Relation of MRP-II with Demand management and Capacity management, Manufacturing calendar. (5+1)

5. **Manufacturing Resource Planning (MRP-II)- (Module-II):** Transition from MRP-I to MRP-II, Closed loop MRP, Comparison between MRP-I and MRP-II, Plant & supplier scheduling, Problems associated with MRP-II, Benefits and prospects of MRP-II, Compatibility between MRP-II & Just-in-Time (JIT). (5+1)

Suggested Text Books:
1. Manufacturing Resource Planning System, Mr. Oliver W.Wight
2. Manufacturing Resource Planning , Mr. Khalid Shaikh,
3. Manufacturing Resource Planning System, S. M. Emberly

Suggested Reference Books:
1. Operations Management by Terry Hill, Palgrave
2. The fundamentals of Production Planning and Control by Stephen Chapman, Pearson

Semester III		313 OSCM- Sustainable Supply Chains
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO313OSCM.1	REMEMBERING	ENUMERATE the key concepts of Sustainable Supply Chains and Sustainable Supply Chain Management.
CO313OSCM.2	UNDERSTANDING	DESCRIBE and DISCUSS the role and importance of sustainability and sustainable development in different types of supply chains.
CO313OSCM.3	APPLYING	IDENTIFY and USE relevant established and emerging principles, frameworks and theories in sustainable logistics and supply chain management.
CO313OSCM.4	ANALYSING	INTEGRATE fundamental strategies, tools and techniques to analyze and design environmentally sustainable supply chain systems.
CO313OSCM.5	EVALUATING	DETERMINE the unsustainable impact of logistics activities, both individual, and in the wider context of the supply chain.
CO313OSCM.6	CREATING	COMPILE the managerial challenges, and FORMULATE a structured solution to these, with clear implications for relevant stakeholders.

1. **Introduction:** Sustainable Supply Chain Concept, Supply Chain Sustainability Management, Need, Business imperatives. Leveraging Connections of the Consumer, Brand, and Environmental Sustainability, Overview of Green Supply Chain, Concept of Green Logistics, Green Logistics – Rhetoric & reality, Key drivers for greening of Logistics & Supply Chains, Benefits of Green Supply Chains. (5+1)

2. **Closed Loop Supply chains:** Natural resource Management, Global warming, environment legislation, Managing reverse logistics, recycling through lease and service agreements, Supply Chain Integration in View of Secondary Raw Materials, Sustainable supply chain products - from cradle to cradle. (5+1)

3. **Environmental Costs of Logistics:** Arguments for and against internalizing environmental costs of logistics, Monetary calculation of environmental costs, Concept of Carbon Credits, Guidelines for carbon foot printing, Carbon foot printing process, success factors in carbon foot printing, Carbon Auditing of Supply Chains, Sustainable transportation, Greening transportation in the supply chain, Reverse channel design: Profitability VS Environmental benefits. New strategies to improve sustainability through supplier assessment. (6+1)

4. **Monitoring Performance:** Measuring and Monitoring of Sustainable Supply Chain, Evaluating the impact of SC activities on Sustainability: Economic, Environmental and Social, Visible Supply Chain - Process, Product and Performance, Product oriented monitoring, Benefits and use of performance measurement, Problems with measuring performance, Stages of Supply Chain Performance Measurement. (5+1)

5. **Sustainable purchasing and procurement:** The role of procurement in the supply chain, Drivers and barriers for sustainable procurement, Procurement frameworks, Ecolabels, Lifecycle assessment, Comparing purchasing options. Managing future supply chain, International Supply Chain Management and Collaboration Practices. (4+1)

Suggested Textbooks:
1. Strategy for Sustainability: A Business Manifesto by A. Werbach
2. Earth, Inc.: Using Nature's Rules to Build Sustainable Profits, G. Unruh
3. The Ecology of Commerce: A Declaration of Sustainability by P. Hawken, Harper Paperbacks
4. Greening of Industry Networks Studies, Behnam Fahimnia Michael G.H. BellDavid A. Hensher Joseph Sarkis Editors Green Logistics and Transportation A Sustainable Supply Chain Perspective
5. Environmental Issues in Logistics and Manufacturing Series editor Eco Production. Paulina Golinska, Poznan, Poland.

Suggested Reference Books:
1. Sustainable Logistics and Supply Chain Management: David B Grant, Alexander Trautrims and Chee Yew Wong
2. Logistics Operations, Supply Chain Management and Sustainability: Paulina Golinska
3. Sustainable Fashion Supply Chain Management: From Sourcing to Retailing, edited by Tsan-Ming Choi, T. C. Edwin Cheng

Semester III		314 OSCM- Business Excellence
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO314OSCM.1	REMEMBERING	REPRODUCE the essential tenets of Business Excellence in organizations with special emphasis on Operations Excellence
CO314OSCM.2	UNDERSTANDING	EXPLAIN the basic principles of various models of Business Excellence.
CO314OSCM.3	APPLYING	MAKE USE OF the concepts, tools and techniques of Business Excellence in the various areas of Operations, Supply Chain and Services
CO314OSCM.4	ANALYSING	ILLUSTRATE the various facets of development, implementation and assessment of business excellence
CO314OSCM.5	EVALUATING	FORMULATE a managerial perspective and DEVELOP an informed decision-marking ability for driving Business Excellence in the various areas of Operations, Supply Chain and Services
CO314OSCM.6	CREATING	DISCUSS what makes some organizations best-in-class organizations.

1.   **Business Excellence:** Business Excellence – Concept & Need. Fundamental concepts, European Foundation for Quality Management (EFQM), Malcolm Baldrige National Quality (MBNQA) framework, Deming Award, Indian BE Models such as Tata Business Excellence Model, Golden Peacock Award by the Institute of Directors(IOD), CII-EXIM Bank Award for Business Excellence, Rajiv Gandhi National Quality Award (RGNQA), etc, Core Values and Concepts, TQM Vs Business Excellence, Paradigm Shift. (5+1)

2.   **Leadership triad:** Leadership, Strategy and Customers, Role of Senior Leadership and communication, Vison, Mission and Values, Organizational Governance, Strategy - Strategy development and deployment process, Tools and Techniques for strategy development and deployment - Hoshin Kanri, BSC, etc. Customers – Voice of Customer, current and potential customers, Customer Satisfaction and Engagement, Product and Service Offerings. (5+1)

3.   **Results triad:** People, Operations and Results, Results flowing from all areas of organization, Measurement, Analysis, and Knowledge Management, Overall Performance Management. (5+1)

4.   **Assessment:** Assessment of organizations based on BE Models and guidelines, developing assessors, Factors in assessment, scoring bands, global scale for comparison. (5+1)

5.   **Comparisons and Benchmarking:** Benchmarking within organization, across the BUs and sister organizations, benchmark grid, benchmarking with competitors and global benchmarks. (5+1)

Suggested Textbooks:
1. The Business of Excellence: Building High-performance Teams and Organizations by Justin Hughes, Bloomsbury Publishing.
2. Achieving Class A Business Excellence: An Executive's Perspective by Dennis Groves, Kevin Herbert and Jim Correll, Wiley Publications
3. Design for Operational Excellence: A Breakthrough Strategy for Business Growth by Kevin J. Duggan, McGraw-Hill Education
4. From Quality to Business Excellence: A Systems Approach to Management by Charles G. Cobb, ASQ PR
5. Business Excellence through Process Management by Manik Kher, VIVA BOOKS

Suggested Reference Books:
1.   Achieving Business Excellence by Pravin Rajpal, Om Books International
2.   Creating a Lean Culture: Tools to Sustain Lean Conversions by David Mann, CRC Press
3.   Measuring Business Excellence, Routledge Advances in Management and Business Studies Book
4.   EFQM, MBNQA, RGNQA Guidelines
5.   54 Tools and Techniques for Business Excellence by Michael Wash, Management Books

Semester III		315 OSCM- Toyota Production System
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO315OSCM.1	REMEMBERING	DESCRIBE 14 principles of the Toyota Way.
CO315OSCM.2	UNDERSTANDING	RELATE the TPS with other business situations.
CO315OSCM.3	APPLYING	IMPLEMENT TPS principles to a real-life situation.
CO315OSCM.4	ANALYSING	EXAMINE the application of TPS principles in a service or manufacturing unit/ organization.
CO315OSCM.5	EVALUATING	DESIGN a process for executing Improvement Initiatives at workplace.
CO315OSCM.6	CREATING	BUILD an organization culture to foster continuous improvement.

1. **The Toyota Way:** Using Operational Excellence as a Strategic Weapon. Toyota Production System Vs Lean Production, what does it actually mean by getting Lean, The Heart of the Toyota Production System - Eliminating Waste, The TPS House Diagram (5+1)
2. **The 14 Principles of the Toyota Way:** An executive summary of the culture behind TPS, Toyota Way in action, Long Term Philosophy, creating continuous process flow, Pull system to avoid over production. (5+1)
3. Leveling Workload (Heijunka), Getting quality right the first time, Standardization of the task, Use of Visual Control, Use of reliable technology. (5+1)
4. **Leadership:** Role of Leaders in Manufacturing Philosophy, Development of Exceptional Teams, Challenging and respecting extended networks, see yourself to understand the situation, Developing decisions with consensus. (5+1)
5. **Organizational Aspects:** Become a learning organization, Continuous Improvement, Using the Toyota Way to transform organizations, Lean Manufacturing, Lean, Agile and Sustainable Manufacturing. (5+1)

Suggested Text Books:
1. The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer by Jeffrey K. Liker McGraw-Hill

Suggested Reference Books:
1. The Toyota Kaizen Continuum: A Practical Guide to Implementing Lean by John Stewart , Taylor and Francis Group
2. The Toyota Way Field book A Practical Guide for Implementing Toyota's 4 Ps by Jeffrey K. Liker and David Meier, Tata McGraw-Hill Edition

Semester III		316OSCM- Operations & Service Strategy
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316OSCM.1	REMEMBERING	ENUMERATE the key components of operations strategy.
CO316OSCM.2	UNDERSTANDING	EXPLAIN the linkages between operations strategy and competitive advantage as the basis of competitive position through superior product development, cost, quality, features.
CO316OSCM.3	APPLYING	ILLUSTRATE the broader context of business strategy & fit between manufacturing and operations capabilities and the business strategy
CO316OSCM.4	ANALYSING	EXAMINE the concepts of competitive leverage using manufacturing and operations, the fit of the various elements of manufacturing and operations, the impact of the competitive environment, and the structure of the value chain.
CO316OSCM.5	EVALUATING	DESIGN the operations and service strategy.
CO316OSCM.6	CREATING	FORMULATE an operations strategy (long-term plan) and link with operational decisions.

1.   **Operations Strategy:** Introduction, Relationship Between business grand strategies & the operations strategy, Sstrategic issues in manufacturing / operations, Elements of Operations Strategy, Competing through operations. Operation strategy in global economy, Changing nature of business, Quality, Customer service and cost challenges and social responsibility, Current perspective-Strategic fit (5+1)

2.   **Methodology for Developing Operations Strategy:** Value as business concept, Strategy- Formulation Process.– Value Chain concept , Focus, core competence and distinctive capabilities, stake holders & strategy, Checking markets, Outcome of Market debate – Linking manufacturing to Markets – strategic integration – why products sell in the markets – Order Winners, Order Qualifiers. Lean systems-Eliminating waste.

3.   **Operation Strategy Implementation:** Technology strategy Issues in New Product development Time to market – strategic nature of process– Business implication of Process choice – Hybrid Process. Change management and Sustainability Procedure – company or plant-based profiles – decisions for product reallocation – downsizing – Capacity decisions Progression & Regression (5+1)

4.   **Strategic Resource Management:** Importance, issues involved – organizational issues operational approaches to improving, delivery system, controlling operations – key performance Indicators, PQCDSM (Productivity, Quality, Cost, Delivery Time, Safety, Morale)

5.   **Service Strategy:** Introduction, The service opportunity, Service growth- How to grow in service, Service Focus Strategy, Design an Effective service organization, Service Supply Chain, Service Pricing, Service Innovation. (5+1)

Suggested Text Books:
1.   Operations Management Theory & Practice – B. Mahadevan - Pearson
2.   Operations Now by Byron Finch, TMGH
3.   Operations Research – by Nita Shah, Ravi Gor, Hardik Soni- Prentice Hall India

Suggested Reference Books:
1.   Operations Management by Norman Gaither, Greig Fraizer, Cengage Learning, India Ed.
2.   Operations Management by Terry Hill, Palgrave

Semester III		317 OSCM- Six Sigma for Operations
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO317OSCM.1	REMEMBERING	DESCRIBE the Key Concepts and Definitions associated with Quality Management, Six Sigma and Process of Six Sigma
CO317OSCM.2	UNDERSTANDING	SUMMARIZE the six-sigma philosophy along with understanding of 7 QC Tools.
CO317OSCM.3	APPLYING	PREDICT the change due to Six Sigma Implementation and Application of Six Sigma tools in new settings
CO317OSCM.4	ANALYSING	APPRECIATE use of Six Sigma for services performance improvement and strengthening the Organizational Structures
CO317OSCM.5	EVALUATING	DECIDE control chart to use for given set of data and ROSS (Return on Six Sigma)
CO317OSCM.6	CREATING	CREATING a Case for Business Models in Different Industries/Proposing a Strategy by Studying the cases of Successful Six Sigma Implementation

1.   **Introduction to Lean Six Sigma:** History of Quality (Key Concepts by Quality Guru- Deming, Juran, Crosby, Ishikawa, Taguchi etc.), History of Continuous Improvement, Evolution of Six Sigma, Defining Six Sigma – philosophy and objectives, Six Sigma Principles and Focus Area, Value of Six Sigma. DMAIC Process

2.   **DEFINE and MEASURE PHASE: DEFINE** - Six Sigma Project Identification, Selection and Definition, Project Charter and Monitoring, Process characteristics and analysis, Process Mapping: SIPOC- Suppliers – Inputs – Process – Outputs – Customers. **MEASURE** - Data Collection and Summarization, Measurement systems: Fundamentals, Accuracy, Precision, Discrimination, R&R Studies, Linearity, Process Stability, Fundamentals of statistics: Probability theory. Process capability analysis: Key Concepts, Measures and Indices, Non-normal process capability analysis, (5+1)

3.   **ANALYZE and IMPROVE PHASE: ANALYZE -** Hypothesis testing: Fundamentals, Single Population Test, Two Population Test. Correlation and Regression Analysis, Regression Analysis: Model Validation. Introduction to One-Way ANOVA, Two-Way ANOVA, Multi-vari Analysis, Failure Mode Effect Analysis (FMEA) **IMPROVE -** Introduction to Design of Experiment, Randomized Block Design, Factorial Design, Fractional Factorial Design, Taguchi Method: Key Concepts and Illustrative Application. (5+1)

4.   **CONTROL PHASE:** Seven QC Tools, Statistical Process Control: Key Concepts, Control Charts for Variables, Operating Characteristic (OC) Curve for Variable Control charts. Statistical Process Control: Control Charts for Attributes, Operating Characteristic (OC) Curve for Attribute Control charts. Acceptance Sampling: Key Concepts, Design of Acceptance Sampling Plans for Attributes, Design of Acceptance Sampling Plans for Variables, Return on Six Sigma – ROSS. (5+1)

5.   **Six Sigma Implementation Challenges:** Design for Six Sigma (DFSS): DMADV, DMADOV, DFX Six Sigma Team Management: Composition and Layers, Six Sigma: Case study and Applications, Overview of Lean Six Sigma, Critical Success Factors in Implementation of Six Sigma. (5+1)

Suggested Text Books:
1. Daniel J. Zrymiak Govindarajan Ramu Roderick A. Munro, The Certified Six Sigma Green Belt Handbook
2. Hemant Urdhwareshe, Six Sigma for Business Excellence: Approach, Tools and Applications, Pearson Education
3. Mitra, Amitava, Fundamentals of Quality Control and Improvement, Wiley India Pvt Ltd

Suggested Reference Books:
1. T. M. Kubiak and Donald W. Benbow, The Certified Six Sigma Black Belt Handbook, Pearson Publication.
2. Montgomery, D C. Statistical Quality Control: A modern introduction, Wiley.
3. Forrest W. Breyfogle III, Implementing Six Sigma, John Wiley & Sons.
4. Evans, J R and W M Lindsay, An Introduction to Six Sigma and Process Improvement, CENGAGE Learning.
5. Howard S. Gitlow and David M. Levine, Six Sigma for Green Belts and Champions, Pearson Education, Inc.
6. Montgomery, D C. Design and Analysis of Experiments, Wiley.
7. Larson, Alan, Demystifying Six Sigma: A Company–Wide Approach to Continuous Improvement, American Management Association

Subject Core (SC) Courses - Semester IV
Specialization: Operations & Supply Chain Management

Semester IV		403 OSCM- E Supply Chains and Logistics
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO403OSCM .1	REMEMBERING	DESCRIBE the structure of modern days Logistics.
CO403OSCM .2	UNDERSTANDING	EXPLAIN the key concepts of Supply Chain Management and the – driving forces in contemporary Supply Chain Management.
CO403OSCM .3	APPLYING	IDENTIFY the various flows in real world supply chains and Logistics. IDSCRIBE the importance of documentations.
CO403OSCM .4	ANALYSING	COMPARE and CONTRAST push and pull strategies in Supply Chain Management. ANALYSE the impact of tracking system linkage in Logistics.
CO403OSCM .5	EVALUATING	EXPLAIN the key Operational Aspects of E Procurement.
CO403OSCM .6	CREATING	DEVELOP a framework for e-logistics

1. **Introduction to E-logistics:** Nature and Scope of E Logistics, Forward E-logistics, Reverse E-logistics, Challenges of E-logistics, environmental issues, e-business strategy, Application for E-logistics in Business to business and Business to consumers, Logistics renovation towards E-logistics, New trends and technology in logistics. (7+2)

2. **e-Supply Chain Management:** Competitive advantages through e-Supply chain management, Process orientation as a basic understanding in the value creation process, Holistic approach to supply chain management, e-Supply Chain Management as a concept for success, Collaborative Commerce: The future in e-SCM , e-Supply chain system, Elements of e-supply chains, Characteristics of e-SCM, Structuring the e-SCM business architecture strategy. (7+2)

3. **E-logistics documentation:** Electronic data interchange, ERP Enterprise resource planning systems, Intranets and extranets – The world wide web, Web-enabled relational databases, data warehouses and data marts, Decision support systems. (6+2)

4. **E-Tracking Systems:** ASNs, tracking systems, Satellite global positioning systems (GPS) and geographic information systems (GIS), Bar-coding and scanning, Electronic signature technology, Wireless technology, Radio frequency identification (RFID). (8+2)

5. **E-Supply Chains & Logistics:** Electronic procurement (e-Procurement): Transport and delivery management, Packing and order management, Inventory and warehousing, E-business logistics and its benefits. E-Sales: e-Sales in the e-Commerce environment, CRM as a philosophy, e-Distribution: distribution strategies in the e-age, e-Payment: transactions along the e-Supply chain, e-SCM scorecard: controlling in e-Supply chain management. (8+2)

Suggested Text Books:
1. E-Supply-Chain-Management, Prof. Dr. Helmut H. Wannenwetsch, Sascha Nicolai
2. Applications of Supply Chain Management and E-Commerce Research, Joseph Geunes, Elif Akçali… in Applied Optimization
3. Supply chain management, Engaging technology to build market – winning business partnerships, David F Ross
4. Supply Chain Management, Oliver Lawrenz… in Business Computing
5. Logistics, Harald Gleissner J. Christian Femerling
6. Lean Supply Chain and Logistics Management Paul Myerson

Suggested Reference Books:
1. Supply Chain Logistics Management, Donald Bowersox, David Closs, M Bixby Cooper, Tata McGraw Hill.
2. Introduction to Materials Management, J.R. Tony Arnold, Stephen Chapman, Ramakrishnan, Pearson.

Semester IV		404 OSCM- Industry 4.0
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404OSCM .1	REMEMBERING	DEFINE industrial revolutions and its different aspects.
CO404OSCM .2	UNDERSTANDING	EXPLAIN the role of technology pillars of Industry 4.0.
CO404OSCM .3	APPLYING	DEMONSTRATE the use of data in effective decision making.
CO404OSCM .4	ANALYSING	ILLUSTRATE the need of cyber physical system for sustainable competitive advantage.
CO404OSCM .5	EVALUATING	EXPLAIN the challenges faced by various industries in full fledge implementation of Industry 4.0
CO404OSCM .6	CREATING	DEVELOP a framework for any organization using base of Smart Industry Readiness Index Proposed by Singapore EDB

1.   **Decoding Various Aspects of Industrial Revolutions** : The 4th Industrial Revolution: The Various Industrial Revolutions, Japanese vs. Western approach for manufacturing excellence, Introduction to Industry 4.0, Overview on Mechatronics, Sensing and Actuation, Communication and Networking, Digitalization and the Networked Economy, Drivers, Enablers, Compelling Forces and Challenges for Industry 4.0, The Journey so far: Developments of Industry 4.0 in developed countries. Comparison of Industry 4.0 Factory and Today's Factory, Developments in Industrial revolution, its impact on governments, businesses, civil society and individuals, and offers bold ideas. (7+1)
2.   **Way to Fourth Industrial Revolution:** Features and uniqueness of the Cyber-physical Systems, Introduction to Pillars of Industry 4.0, Collaborative Platform and Product Lifecycle Management, Manufacturing as a Administration, Horizontal and Vertical Integration. Smart Factory, Smart Manufacturing, Smart Devices and Products, Smart Logistics, Smart Cities. Internet of Things (IoT) & Industrial Internet of Things (IIoT) and Introduction to IIoT layers, Overview of Reference Architectural Model Industrie 4.0 (RAMI 4.0), Internet of Services. (8+2)
3.   **Data and Analytics:** Resource-based view of a firm and importance of data as a new resource for organizations, Big data analytics (BDA) and significance of V's of big data. Overview of Software Defined Network (SDN), Harnessing and sharing knowledge in organizations, Four types of Analytics: Descriptive, Diagnostics, Predictive, and Prescriptive Analytics, Artificial Intelligence, Cloud Computing Basics. (7+2)
4.   **Ecosystems for Industry 4.0:** Robots and Cobots, Mobile Computing, Supporting Systems and related disciplines for I4.0 such as Augmented Reality, Virtual Reality and Mixed Reality, Additive Manufacturing, Automated Guided Vehicle (AGV), Cyber Security. (7+2)
5.   **Challenges, Preparedness and Use Cases:** Opportunities and Challenges, Future of Work system and skill requirements, Leadership for Industry 4.0, Strategies for competing in an Industry 4.0 era, Introduction to Smart Industry Readiness Index (SIRI), Overview of Society 5.0. Other Applications and Case Studies Industry 4.0 laboratories (CII 4.0), IIoT case studies across world: Sector-wise and/or Function-wise e.g. Healthcare, Automobile, Banking, Power etc. or Inventory Management, Quality Control, Plant Safety and Security, Facility Management etc. (Minimum 1) (7+2)

Suggested Text Books:
1. The Fourth Industrial Revolution, by Klaus Schwab, Portfolio Penguin
2. Industry 4.0: The Industrial Internet of Things, by Alasdair Gilchrist
3. Industry 4.0: Entrepreneurship and Structural Change in the New Digital Landscape (Studies on Entrepreneurship, Structural Change and Industrial Dynamics), by Tessaleno Devezas, Joao Leitao, Askar Sarygulov, Springer International Publishing
4. "Industrial Internet of Things: Cyber manufacturing Systems" by Sabina Jeschke, Christian Brecher, Houbing Song, Danda B. Rawat (Springer)

Suggested Reference Books:
1. Analysing the Impacts of Industry 4.0 in Modern Business Environments, by Richard Brunet-Thornton and Felipe Martinez, IGI Global

2. The 4th Industrial Revolution: Responding to the Impact of Artificial Intelligence on Business, Book by Felix Hovsepian and Mark Skilton
3. Industry X.0: Realizing Digital Value in Industrial Sectors, by Eric Schaeffer, Kogan Page
4. Analysing the Impacts of Industry 4.0 in Modern Business Environments, Felipe Martinez; Richard Brunet-Thornton; IGI Global

Subject Elective (SE) Courses - Semester III	
Specialization: Operations & Supply Chain Management	

Semester IV		**409 OSCM- Enterprise Resource Planning**
2 Credits	LTP: 2:1:1	**Subject Elective (SE) Course – Operations & Supply Chain Management**

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO409OSCM.1	REMEMBERING	DESCRIBE the key concepts of ERP systems for manufacturing or service organizations.
CO409 OSCM.2	UNDERSTANDING	EXPLAIN the scope of common ERP Systems modules.
CO409 OSCM.3	APPLYING	DEVELOP basic understanding of how ERP enriches the business organizations in achieving a multidimensional growth.
CO409 OSCM.4	ANALYSING	EXAMINE the challenges associated with implementing enterprise systems and their impacts on organizations.
CO409 OSCM.5	EVALUATING	JUSTIFY selection of an appropriate ERP transition strategy.
CO409 OSCM.6	CREATING	FORMULATE best selection and implementation strategy in a real setting.

1.   **Introduction to ERP:** Evolution of ERP, Reasons for the Growth of ERP, Scope of ERP systems, General model of business and ERP, Three Tier Architecture of ERP, Various Modules of ERP, Benefits and Risks of ERP, ERP and related technologies – Data mining, data warehousing, On-Line Analytical Processing (OLAP), Supply Chain Management (SCM), Customer Relationship Management (CRM), Geographical Information Systems (GIS).(5+1)

2.   **ERP Modules:** Introduction; Finance, HRM, Production Planning, Plant Maintenance, Quality Management, Materials Management and Manufacturing Management. (5+1)

3.   **Business Process Reengineering (BPR):** Introduction, need of BPR, Pros and Cons of BPR, reasons for failure and success of BPR, Reengineering phases, Role of IT in BPR, **Selection of ERP vendors:** Role of vendors, consultants and users, Vendor selection process, In-House Implementation - Pros and Cons. (5+1)

4.   ERP Implementation Lifecycle: Issues in Implementing ERP Packages; Pre-evaluation Screening; Package Evaluation; Project Planning Phase; Gap Analysis; Reengineering; Configuration; Implementation; Team Training; Testing; Going Live; End-User Training; Post Implementation (Maintenance Mode), Success and failure factors of ERP implementation. (5+1)

5.   **ERP Transition Strategies** - Big Bang Strategy, Phased Implementation, Parallel Implementation, Process Line Transition Strategy, Hybrid Transition Strategy, Strategy Choice; Success and failure factors of an ERP implementation; ERP implementation costs; Organization and working of ERP implementation team. (5+1)

Suggested Text Books:
1.   Enterprise Resource Planning-Text and Cases, Rajesh Ray, Tata McGraw Hill
2.   Enterprise Resource Planning, Alexis Leon, Tata McGraw Hill
3.   Enterprise Resource Planning – A Managerial Perspective, Veena Bansal, Pearson
4.   Vinod Kumar Garg, N. K. Venkitakrishnan, Enterprise Resource Planning: Concepts and Practice, PHI

Suggested Reference Books:
1.   Enterprise Resource Planning, Mary Sumner, Pearson Education
2.   Enterprise Resource Planning- A Managerial Perspective, D P Goyal, Tata McGraw Hill
3.   Textbook of Enterprise Resource Planning, Mahadeo Jaiswal and Ganesh Vanapalli, Macmillan
4.   Manufacturing Resource Planning (MRP II) with Introduction to ERP; SCM; an CRM by Khalid Sheikh, Publisher: McGraw-Hill
5.   The Impact of Enterprise Systems on Corporate Performance: A study of ERP, SCM, and CRM System Implementations [An article from: Journal of Operations Management] by K.B. Hendricks; V.R. Singhal; and J.K. Stratman, Publisher: Elsevier
6.   ERP and Supply Chain Management by Christian N. Madu, Publisher: CHI 4. Implementing SAP ERP Sales & Distribution by Glynn C. Williams, Publisher McGraw-Hill

Semester IV		410 OSCM- World Class Manufacturing
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO410OSCM.1	REMEMBERING	DEFINE the basic terms associated with Manufacturing Excellence and World Class Manufacturing
CO410OSCM.2	UNDERSTANDING	SUMMARIZE the features of various frameworks used for World Class Manufacturing
CO410OSCM.3	APPLYING	IDENTIFY the challenges to manufacturing industry in the information age
CO410OSCM.4	ANALYSING	ANALYZE the usage of Information management tools, Material processing and handling tools.
CO410OSCM.5	EVALUATING	EVALUATE the country's preparedness for World Class Manufacturing
CO410OSCM.6	CREATING	ESTIMATE the performance of manufacturing firms with the measurement system to determine the readiness for World Class Manufacturing

1. **World Class Manufacturing and the Information Age**: Information Age, Competing in the Information Age. Business challenges of the Information Age, Operating Environment of the Information Age. India's global Competitiveness and Manufacturing Excellence. World Class Manufacturing and the Information Age Competition, Manufacturing Challenges of the Information Age – Time based competition. Managing knowledge, Problems in the Manufacturing Industry – Coordination, Need for Control, Fragmented Information Infrastructure, Insufficient process ability of available information. (5+1)

2. **World Class Manufacturing and Competitive Advantage:** Manufacturing Excellence and Competitiveness. Concept of World Class Manufacturing. Hall's Framework of Value-added Engineering, Schonberger's framework of World Class Manufacturing, Gunn's model of World Class Manufacturing, Maskell's model of World Class Manufacturing. The Philosophy of World Class Manufacturing, The Evolution of World Class Manufacturing, The first principles of World Class Manufacturing, The Practices of World Class Manufacturing, Quality in World Class Manufacturing. (5+1)

3. **World Class Manufacturing - Systems and Tools**: The integration imperative, Overview of systems and tools, Making sense of the manufacturing alphabet soup, Information management tools, Material processing and handling tools. Information management tools – Product and Process Design Tools, Bar Code Systems, Kanban, SQC, Business Integration and Decision Support Tools. Material processing and handling tools – Flexible Manufacturing Systems, Rapid Prototyping, Lean production tools, Poka Yoke, SMED. An assessment of Manufacturing systems and tools. (5+1)

4. **World Class Manufacturing –Indian Scenario:** Competitiveness of Indian Manufacturing, Manufacturing Performance and planned strategies of Indian Manufacturing firms. Manufacturing readiness of Indian Firms, Manufacturing Objectives and strategy. Usage of management tools and technologies, Manufacturing Management Practices, The Manufacturing Strategic Intent Framework, Strategic use of IT in Indian Manufacturing, Classification by breadth of IT infrastructure and depth of manufacturing applications, Classification by breadth and integration of IT infrastructure, Manufacturing Strategy – World class Status and IT Use: Is India Ready for World Class Manufacturing? (5+1)

5. **Leading India towards World Class Manufacturing:** Business Strategy and Global Competitiveness. Generic Manufacturing Strategies for the Information Age. Developing strategic thinking in manufacturing, Issues in Strategic planning for World Class Manufacturing, Barriers to using IT strategically. Strategic Planning Methodology for World Class Manufacturing, Implementing the World Class Manufacturing Plan, Need for performance measurement –The PO-P System, The TOPP System, The AMBITE System, Quality Performance, Cycle Time, Delivery Performance and Customer Service, Financial Performance Measures, The Balanced Score Card, Human Resource Dimensions in World Class Manufacturing – Morale and Teamwork. (5+1)

Suggested Text Books:
1. World Class Manufacturing – A Strategic Perspective by B S Sahay, K B C Saxena, Ashish Kumar, Macmillan Publishers India Ltd.
2. World Class Manufacturing by K. Sridhara Bhat, Himalaya Publishing.

Suggested Reference Books:
1. Making Common Sense Common Practice – Models for Manufacturing Excellence by Ron Moore, Elsevier Pub., 3rd Ed.
2. Competitive Manufacturing Management by John Nicholas, TMGH.
3. The Japanese Manufacturing Techniques by Richard Schonberger, The Free Press
4. Just in Time Manufacturing by M. G. Korgaonker, Macmillan Publishers India Ltd.

Semester IV		411 OSCM- Supply Chain Strategy
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO411OSCM.1	REMEMBERING	DEFINE basic terms and concepts related to Strategy, Supply Chain
CO411OSCM.2	UNDERSTANDING	EXPLAIN the SC Components and Processes
CO411OSCM.3	APPLYING	ILLUSTRATE the importance of SC strategies on competitive advantage.
CO411OSCM.4	ANALYSING	OUTLINE a typical Supply Chain Model for a product / service and ILLUSTRATE the linkages of strategies with real time issues using Information Technology.
CO411OSCM.5	EVALUATING	EVALUATE and EXPLAIN impact of strategic decisions on SC
CO411 OSCM.6	CREATING	FORMULATE and DISCUSS a model for SCM strategies

1. **SC and Business Strategy:** Understanding Strategy and SC, Objectives of SC, decision phases, process strategies. Generic strategies in SC – Competitive & SC strategies, Strategies for SC--fit-demand based, commodity based, cost centric. Strategies to deal with uncertainty, Competitive advantage through SC Strategies. (5+1)
2. **Supply Chain Strategies -- Planning and scheduling:** Demand forecasting – Role of forecasting in SC, Components of forecasting, Forecasting models, Aggregate planning- Inventory, Transportation, Pricing, Information, Internal logistics, Transportation using LP (numerical). Sales and Operation planning – responsiveness of predictive variables, sales planning at real time. Scheduling in SC – impact, obstacles, tactics, importance. (5+1)
3. **SC Strategy and Distribution Network:** SC Strategy--Supplier Strategy, Operations Strategy, Logistics Strategy. Designing distribution networks – Factor affecting distribution, Framework, online sales, Omni-channel retailing, different network models for designing, identifying and allocating. Global SC networks – impact, importance, risk management in SC. (5+1)
4. **Performance measures in SC Strategy:** Financial measures - Cost of raw materials, Revenue from goods sold., Activity-based costs like the material handling, manufacturing, assembling rates etc. Inventory holding costs, Transportation costs, Cost of expired perishable goods, Penalties for incorrectly filled or late orders delivered to customers, Credits for incorrectly filled or late deliveries from suppliers, Cost of goods returned by customers, Credits for goods returned to suppliers. Non – Financial measures - Cycle Time, Customer Service Level, Inventory Levels. Resource Utilization. (5+1)
5. **SC Strategy and Information Technology:** SC Strategies and Information Technology, Role of IT in SC, Application of strategies in retail and healthcare, Building SC models using Excel, Agile vs Lean strategies, LeAgile supply chain management strategy, Green SCM, Future trends in SC. (5+1)

Suggested Text Books:
1. Supply Chain Management: Strategy Planning & Operations, Sunil Chopra, Peter Meindl, Pearson
2. Supply Chain & Logistics Management, Bowersox, Closs & Cooper, Tata McGraw Hill
3. Designing & Managing the SC – Concepts, Strategies & Case studies, Levi, Kaminsky et. al., Tata McGraw Hill

Suggested Reference Books:
1. Logistics Management & Strategy, Harrison and van Hoek, Prentice Hall
2. Total Supply Chain Management, Basu & Wright, Elsevier
3. Logistics Management: The Supply Chain Imperative, Vindo Sople, Pearson Education
4. Supply Chain Management, Mentzer, Response Books.

5.   Global Logistics – New Directions in Supply Chain Management, Edited by Donald Waters, Kogan Page

Semester IV		412 OSCM- Financial Perspectives in Operations Management
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO412OSCM.1	REMEMBERING	REMEMBER basic concepts used in cost management, Budgeting and activity-based costing
CO412OSCM.2	UNDERSTANDING	UNDERSTAND the importance of cost management as key to profitability.
CO412OSCM.3	APPLYING	CALCULATE NPV, PI, IRR, BCR, NBCR, Project cost overruns and cost control with Microsoft Excel.
CO412OSCM.4	ANALYSING	Outline capital budgeting techniques used in Operations.
CO412OSCM.5	EVALUATING	Explain the role of Financial Institutions in project financing
CO412OSCM.6	CREATING	Solve the real time issues involved in Operations and Project Management using appropriate method in order to reduce the costs.

1.   **Cost Management:** Cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking. Working Capital Management –Concept, Components, Scope, Practical applicability. Make or buy, hire vs purchase (Numerical & Analysis) (5+1)

2.   **Activity Based Costing:** Concept and basic knowledge, applicability, Limitations, Simple Numerical. Cost Concepts, behaviour, type, allocation, apportionment and absorption along with nature, applicability and limitations of Job & Process Costing. (5+1)

3.   **Budgeting:** Budgeting – nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting. (5+1)

4.   **Capital Budgeting:** The Capital Budgeting Concept & Process - An Overview, Generating Investment Project Proposals, Estimating Project, After Tax Incremental Operating Cash Flows, Capital Budgeting Techniques, Project Evaluation and Selection - Alternative Methods, Potential Difficulties , Project Monitoring – Progress Reviews and Post - Completion Audits, Problem of Project Risk, Total Project Risk, Capital Rationing , Decision Tree. (5+1)

5.   **Project Cost Estimate and Risk Analysis:** Cost of project, Components of capital cost of a project, Project Risk Analysis, Project Organization. Project Evaluation and Audit: Sources of financing, Role of Financial Institutions in project financing, Data required for calculation of NPV, PI, IRR, BCR, NBCR, Project cost overruns and cost control, Phases of post audit, Type of post audit, Project closure (Use of Microsoft Excel/MS Project is Recommended.) (5+1)

Suggested Text Books:
1.   Financial Management by I.M. Pandey, Vikas Publications
2.   Financial Management by M.Y.Khan & P.K.Jain, TMGH
3.   Project Management by K. Nagarajan, New Age Publications

Suggested Reference Books:
1.   Financial Management by Rajiv Shrivastava & Anil Mishra, Oxford Publication
2.   Corporate Financial Management by Arnold Glen, Pearson Publication

Semester IV		413 OSCM- Facilities Planning
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO413OSCM.1	REMEMBERING	DESCRIBE the concepts and principles of Facilities Planning.
CO413OSCM.2	UNDERSTANDING	EXPLAIN the key considerations in Facilities Planning.
CO413OSCM.3	APPLYING	ILLUSTRATE the use of the concepts and principles of Facilities Planning.
CO413OSCM.4	ANALYSING	EXAMINE the practical layouts in real world in light of the theoretical concepts and principles of Facilities Planning.
CO413OSCM.5	EVALUATING	EVALUATE various approaches to Facilities Planning.
CO413 OSCM.6	CREATING	REARRANGE existing layouts for enhanced outcomes.

1.   **Introduction to Facilities Planning**: Facilities planning defined, Significance of Facilities Planning, Objectives of Facilities Planning, Long Range Capacity Planning, Facilities Planning process, Strategic Facilities Planning, Developing Facilities Planning Strategies, Examples of Inadequate Planning. Impact of Environmental Issues on Facilities Planning Product, Process and Schedule Design: Introduction, Product Design, Process Design, Schedule Design, Facilities Design. (5+1)

2.   **Logistics and Facilities Location:** Logistics, Decisions related to Logistics, Issues in Facilities location – Market related factors, Cost-related factors, Regulatory and Policy Issues, Location Planning Methods – Location Factor rating, Centre-of-gravity method, Load-distance method, Transportation Model. Locating Service Facilities, Relocation aspects,

3.   **Layout Planning:** Concept of Layout, Basic Layout Types, Layout Procedures, Algorithmic approach, Department Shapes and Aisles, Multi-floor facility layout, Commercial Facility Layout, Impact of change, Developing alternative layouts. Introduction to ALDEP and CORELAP. Facilities design for various Facilities Functions: Warehouse operations – Functions of Warehouse, Receiving and Shipping Operations, Dock Locations, Storage Operations, Order Picking Operations.

4.   **Service Facilities Layout:** Nature of Services, Operational Classification of services, Structuring the service encounter, Service blueprinting and fail-safing, Role of floor manager in service sectors such as – Hospital, Hotel, Airlines and airports.

5.   **Flow Space and Activity Relationships:** Departmental Planning, Activity Relationships, Flow Patterns, Flow Planning, Measuring Flow, Space Requirements. Personnel Requirements: Employee-Facility Interface, Restrooms, Food Services, Health Services, Barrier-Free Compliance, Office Facility Planning. Material Handling: Scope and Definition of Material Handling, Material Handling Principles, Designing Material Handling Systems, Unit Load design, Material Handling Equipment, Estimating Material Handling costs, Safety Considerations.

Suggested Text Books:
1.   Facilities Planning by Tompkins, White, Bozer and Tanchoco, Wiley India
2.   Operations Management – Theory and Practice by B Mahadevan, Pearson
3.   The Goal by E M Goldratt and Cox J, Great Barrington, North River

Suggested Reference Books:
1.   Operations and Supply Management by Chase, Shankar, Jacobs and Aquilano
2.   Operations Management by Terry Hill, Palgrave.
3.   Operations Management – Quality and Competitiveness in a Global Environment by Russell and Taylor, Wiley India

Semester IV		414 OSCM- Purchasing and Supplier Relationship Management
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO414OSCM.1	REMEMBERING	DESCRIBE the Purchasing Process and its importance in organizations.
CO414OSCM.2	UNDERSTANDING	Students will understand the impact of purchasing on competitive success and profitability of modern-day organizations.
CO414OSCM.3	APPLYING	MAKE USE OF the various Negotiation technique in the context of Purchasing process.
CO414OSCM.4	ANALYSING	ILLUSTRATE how Supplier evaluation and selection is done in organizations and its relationship with corporate Strategy.
CO414OSCM.5	EVALUATING	EXPLAIN the importance of Performance Measurement & Evaluation in operations management.
CO414 OSCM.6	CREATING	BUILD A purchasing strategy for a real world situation.

1.   **Purchasing Process, Policy & Procedures**: Overview of Purchasing & Supply Chain Management, Purchasing Objectives, Responsibilities of Purchasing, Types of Purchases, Improving Purchase Process, Purchasing Procedures, Policy Overview – What makes an effective Policy, Advantages & Disadvantages of Policies, Policies defining - Role & conduct of Purchasing, Buyer-Supplier Relationship, Operational Issues, Ethical considerations in Purchasing. (5+1)

2.   **Purchasing of Services:** Hidden Opportunities, Planning the statement of work, Writing the statement of work, selecting service contractors, Compensating Service suppliers, Professional services, Technical services, Operating services, Contract administration, Develop a sound Procedure for Evaluation. (5+1)

3.   **Strategic Sourcing – Supplier Evaluation & Selection**: Linking Purchasing and Corporate Strategy. Translating Corporate Objectives into Purchasing Goals, Translating Purchasing Objectives into Purchasing Goals, Purchasing Strategy Development Process, Types of Purchasing Strategies, Supply Base Optimization, Critical Role of In-sourcing / Outsourcing, The In-sourcing / Outsourcing Decision Process, Make or Buy, Supplier Evaluation and Selection Process, Need for Supplier Selection, Identifying key sourcing requirements, Evaluation and Selection, Key Supplier Evaluation Criteria. (5+1)

4.   **Negotiation & Contracts Management**: Objectives of negotiation, when to negotiate, The negotiation Process, Preparation, Establishing the Objectives, Dynamics of Negotiation, Phases in face-to-face negotiation, Negotiation Techniques – traditional, collaborative, price analysis, cost analysis. Types of Contracts – Fixed Price, Cost based / Indexation, Long term, Short term. Consideration when selecting contract types, How to write a Contract. Essential elements of Contract, Purchase Order (P.O), Difference between P.O & Contract. (5+1)

5.   **Performance Measurement & Evaluation**: Why Measure Performance, Problems with Purchasing Measurement and Evaluation. Purchasing Measurement Categories – Price Performance Measures, Cost-Effectiveness Measures, Quality, Time related Measures, Technology Innovation Measures, Physical Environment and Safety, Asset Management and Integrated SC Measures. Administration and Efficiency Measures, Developing a Performance Measurement and Evaluation System - Determining which Performance Categories to Measure, Developing Specific Performance Measures, Establish Performance Objectives for each Measure, Finalize system Details, Implement and Review. (5+1)

Suggested Text Books:
1. Purchasing & Supply Chain Management by Monczka, Trent, Handfield, Cengage South Western.
2. Purchasing & Supply Chain Management by Lysons and Farrington, Pearson Education.

Suggested Reference Books:
1. Purchasing & Supply Chain Management by Dobler, Burt, TMGH
2. New Directions in Supply Chain Management: Technology & Strategy Implementation by Tonya Boone and Ram Ganeshan, Jaico Publishing.
3. Extending the Supply Chain by Boyer, Forhlich and Hult, PHI.

Semester IV		415 OSCM- Strategic Supply Chain Management
2 Credits	LTP: 2.0.0	Subject Elective (SE) Course – Operations & Supply Chain Management

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO415OSCM.1	REMEMBERING	DEFINE Key configuration components of Strategic Supply Chain Management.
CO415OSCM.2	UNDERSTANDING	EXPLORE Process Architecture and Toolkits of in Strategic Supply Chain Management
CO415OSCM.3	APPLYING	ILLUSTRATE the Design Organization for Performance and Organizational Change
CO415OSCM.4	ANALYSING	EXAMINE the Right Collaborative Model and Drivers of collaboration of Strategic Supply Chain Management
CO415OSCM.5	EVALUATING	ILLUSTRATE Use of Metrics to Drive Business Success and Roadmap to change
CO415 OSCM.6	CREATING	DEVELOP the architecture of a supply chain.

1. **Supply chain as Strategic Asset** - Key configuration components - Operations strategy, Outsourcing strategy, Channel strategy, Customer service strategy, Asset network, Criteria of robust SC strategy - Aligned with business strategy, Aligned with customers' needs, Aligned with power position, Adaptive, Next Generation Strategy - support continuing improvements in productivity and drive the achievement of business-level outcomes. (5+1)

2. **Process Architecture** – SC architecture details the process, applications, and information to improve and evolve, Components of SC architecture, Tests of Supply Chain Architecture – Strategic fit, End-to-end focus, Simplicity and Integrity, Architectural Toolkits , Levels of the Supply-Chain Operations Reference-model (SCOR) Model - processes, subprocesses, and activities, Processes for End-to-End Supply Chain Management – Plan, Source, Make, Deliver and Return, Next-Generation Processes. (5+1)

3. **Design Organization for Performance** – Primary challenges - structure of SC organization, roles and responsibilities, right people with the right skills. Organisational Change Is an Ongoing Process – modify & redefine, Evolution of the SC Organisation, Guiding Principles for Organizational Design - organization should mirror process, every process has an accountable function or individual, Know, grow, and keep your core capabilities, Organize around the skills you need, Gaining Respect for the Supply Chain Discipline, Next-Generation Organizational Design – new roles and new skills. (5+1)

4. **Build the Right Collaborative Model** - Drivers of collaboration, desire to access - technology, capital-intensive technology, cost of competency to acquire, develop, or maintain, and new market effectively closed off by high entry costs or preconditions. Collaboration Spectrum model, transactional, cooperative, coordinated, and synchronized, Finding the right place on the Spectrum, The Path to Successful Collaboration - Master internal collaboration first, Define the degree of collaboration for each partner segment, Next-Generation Collaboration. (5+1)

5. **Use Metrics to Drive Business Success** - Why Measure, Managing Performance with Metrics, Which Metrics, Next-Generation Performance Management, Roadmap to change - advanced systems Aren't Enough, Stages of supply chain process maturity model, Characteristics of the Next Generation - transparency, flexibility, and simultaneity, Developing a Roadmap – creating the roadmap to change. (5+1)

Suggested Text Books:
1. Strategic SCM – The Five discipline for top performers - Shoshanah Cohen, Joseph Roussel
2. Strategic Supply Chain Management: Creating Competitive Advantage and Value Through Effective Leadership, by Samir Dani
3. Supply Chain Strategies – Customer Driven & Customer Focused by Tony Hines, Elsevier
4. Supply chain management – strategy, planning & operation –Sunil Chopra , Peter Meindl.

Suggested Reference Books:
1. Managing the SC- A Strategic Perspective by Gattorna Walters, Palgrave Macmillan
2. Extending the Supply Chain by Boyer, Forhlich and Hult, PHI, 3rd Indian Reprint
3. Strategic Supply Chain Management by S. Kale, Everest Publication

4. New Directions in Supply Chain Management: Technology & Strategy Implementation by Tonya Boone and Ram Ganeshan, Jaico Publishing
5. Designing & Managing the SC – Concepts, Strategies & Case studies – by Levi, Kaminskyet. al., TMGH.

		Subject Core (SC) Courses - Semester III **Specialization: Business Analytics**

Semester III		**304 BA- Advanced Statistical Methods using R**
3 Credits	**LTP: 2:1:1**	**Subject Core (SC) Course – Business Analytics**

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304BA .1	REMEMBERING	RECALL all basic statistical concepts and associated values, formulae.
CO304BA .2	UNDERSTANDING	EXPLAIN the statistical tools and DESCRIBE their applications in multiple business domains and scenarios
CO304BA .3	APPLYING	APPLY time series analysis in prediction of various trends.
CO304BA .4	ANALYSING	DISCRIMINATE between various types of probability and probability distributions.
CO304BA .5	EVALUATING	FORMULATE and TEST hypothesis using tools of R.
CO304BA .6	CREATING	COMBINE various tools and functions of R programming language and use them in live analytical projects in multiple business domains and scenarios.

1.   **Statistics with R:** Computing basic statistics, Business Hypothesis Testing concepts, Basics of statistical modeling, Logistic Regression, Comparing means of two samples, Testing a correlation for significance, Testing a proportion, t test, z Test, F test, Basics of Analysis of variance (ANOVA), One way ANOVA, ANOVA with interaction effects, Two way ANOVA, Summarizing Data, Data Mining Basics, Cross tabulation. Case studies in different domains- using R. **(7+2)**

2.   **Linear Regression:** Concept of Linear regression, Dependency of variables, Ordinary Least Sum of Squares Model, Multiple Linear Regression, Obtaining the Best fit line, Assumptions and Evaluation, Outliers and Influential Observations, Multi-collinearity, Case studies in different domains- using R. Dimension Reduction Techniques – Concept of latent dimensions, need for dimension reduction, Principal Components Analysis, Factor Analysis. Case studies in different domains- using R. **(7+2)**

3.   **Probability:** Definition, Types of Probability, Mutually Exclusive events, Independent Events, Marginal Probability, Conditional Probability, Bayes Theorem. Probability Distributions – Continuous, Normal, Central Limit theorem, Discrete distribution, Poison distribution, Binomial distribution. **(7+2)**

4.   **Predictive Modeling:**

(a)   Multiple Linear Regression: Concept of Multiple Linear regression, Step wise Regression, Dummy Regression, Case studies in different domains- using R

(b)   Logistic regression: Concept of Logistic Regression, odds and probabilities, Log likelihood ratio test, Pseudo R square, ROC plot, Classification table, Logistic regression & classification problems, Case studies in different domains- using R

(c)   Linear Discriminant Analysis: Discriminant Function, Linear Discriminant Analysis, Case studies in different domains- using R **(7+2)**

5.   **Time Series:** Time Series objects in R, Trends and Seasonality Variation, Decomposition of Time Series, autocorrelation function (ACF) and partial autocorrelation (PACF) plots, Exponential Smoothing, holts Winter Method, Autoregressive Moving Average Models (ARMA), Autoregressive Integrated Moving Average Models (ARIMA), Case studies in different domains- using R. **(7+2)**

Suggested Text Books:
1.   R for Business Analytics, A Ohri
2.   Data Analytics using R, Seema Acharya, TMGH
3.   Data mining and business analytics with R, Johannes Ledolter. New Jersey: John Wiley & Sons.
4.   Statistical Methods, S.P.Gupta
5.   Quantitative Techniques, L.C.Jhamb

6.   Quantitative Techniques, N.D.Vohra

Suggested Reference Books:
1.   Statistics for Management, Levin and Rubin
2.   Statistical data analysis explained: applied environmental statistics with R, Clemens Reimann. Chichester: John Wiley and Sons
3.   Data science in R: a case studies approach to computational reasoning and problem solving, Deborah Nolan. Boca Raton: CRC Press

Semester III		305 BA - Machine Learning & Cognitive intelligence using Python
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO305BA.1	REMEMBERING	DEFINE the key terms in Python, Machine Learning and Cognitive Intelligence
CO305BA.2	UNDERSTANDING	EXPLAIN the applications of Machine Learning in multiple business domains and scenarios
CO305BA.3	APPLYING	DEVELOP a thought process to think like data scientist/business Analyst
CO305BA.4	ANALYSING	ANALYSE data using supervised and unsupervised Learning Techniques
CO305BA.5	EVALUATING	SELECT the right functions, arrays of Python for Machine Learning algorithms.
CO305BA.6	CREATING	COMBINE various tools and functions of Python language in developing Machine Learning algorithms and use them in live analytical projects in multiple business domain and scenarios.

1.   **Python Basics:**   Overview, Python Features, Basic Syntax, Variable Types, Basic Operators, decision making, Loops, Python Data Structures - Lists and Tuples, Sets, Dictionaries, Date & time, Functions, Scope of Variables, Function overloading, Operator overloading ,Objects and Classes. (9+1)
2.   **Working with Data in Python:** Reading files with Open, writing files with Open, loading data with Pandas, working with and saving with Pandas, Array oriented Programming with Numpy, Data cleaning and preparation, Plotting and Visualization, data Aggregation and Group Operations.(9+1)
3.   **Machine Learning and Cognitive Intelligence:** Introduction to Machine Learning- History and Evolution, Machine Learning categories: Supervised, Unsupervised and Reinforcement learning. Framework for building ML Systems-KDD process model, CRISP-DM & SEMMA, Machine learning Python packages, Machine Learning Core Libraries. Introduction to Cognitive Intelligence, Features of Cognitive Intelligence. (8+2)
4.   **Supervised Learning:** Introduction to classification, Linear Regression, Metrics for evaluating linear model, Multivariate regression, Non-Linear Regression, K-Nearest Neighbour, Decision Trees, Logistic Regression, Support Vector Machines, Model Evaluation, Applications of supervised learning in multiple domains. (9+1)
5.   **Unsupervised Learning:** Clustering, Hierarchical clustering, Partitioning Clustering- K-mean clustering, Applications of unsupervised learning in multiple domains. (4+1)

Suggested Text Books:
1.   Machine Learning using Python - Manaranjan Pradhan, U Dinesh Kumar
2.   Ultimate Step by Step Guide to Machine Language using Python: Predictive modeling concepts explained in simple terms for beginners by Daneyal Anis
3.   Machine Learning by Anuradha Srinivasaraghavan and Vincy Joseph
4.   Machine Learning in Python – Michael Bowles
5.   Machine Learning for Absolute Beginners: A Plain English Introduction (First Edition by Oliver Theobald

Suggested Reference Books:
1.   Mastering Machine Learning with Python in Six Steps: A Practical Implementation Guide to Predictive Data Analytics Using Python by Manohar Swamynathan
2.   Machine Learning by Tom Mitchell

3. Python for Data Analysis by Wes McKinney
4. Machine Learning by Rajiv Chopra
5. Machine Learning by Peter Flach
6. Introduction to Machine Learning by Alpaydin Ethem
7. Machine Learning: A step by Step Guide to Learning and Understanding from Beginner to Expert (Beginner, Intermediate and Advanced) – Ronald Anthony

Subject Elective (SE) Courses - Semester III **Specialization: Business Analytics**	

Semester III		312 BA- Social Media, Web & Text Analytics
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO312BA.1	REMEMBERING	DEFINE the key terms in Social Media Analytics, Web Analytics and Text Analytics
CO312BA.2	UNDERSTANDING	EXPLAIN the applications of Social Media Analytics, Web Analytics and Text Analytics in multiple business domains and scenarios
CO312BA.3	APPLYING	DEVELOP a thought process to harness the power of social media analytics to improve website or business
CO312BA.4	ANALYSING	ANALYSE Social Media Analytics and Web Analytics Tools
CO312BA.5	EVALUATING	SELECT the right metrics for Social Media Analytics and Web Analytics
CO312BA.6	CREATING	COMBINE various tools and metrics in building high impact dashboard in multiple business domains and scenarios

1. **Social Media Overview:** Social Media Introduction, definition, evolution, need of social media, Importance of Social Media, Social Media Data Sources, Use of Social Media in Business, Objective and KPIs, Measure, Content flow on Social Network, Challenges, Tools to analyse and measure social data (Facebook, Twitter, Instagram, LinkedIn, YouTube), Social Analytics and competitors, Strategy planning in Social Media Analytics. (5+1)

2. **Social Analytics - Measuring Success:** Metric categories: Divide and Conquer, Selecting the best metrics for the job, Default and Custom Metrics, Elements of effective metrics, Metrics and Strategy. Estimated Metrics: Use and Common applications, Dashboards : Definition, Purpose, Objectives, default and custom dashboards, Reports: elements of reporting, good quality of reporting, 360 overview report, Data gathering in social Media Analytics, Types of Analytics in Social Media, Charts, Machine learning in Social Media. (6+1)

3. **Web Analytics Overview:** Introduction to Web Analytics, Web Analytics 2.0, Elements of Web Analytics 2.0: Clickstream, Multiple Outcomes, Experimentation and Testing, Voice of Customer, Competitive Intelligence, Choosing the right web analytic tool, Critical Web Metrics-Visits and Visitors, Time on Page and Time on Site, Bounce Rates, Exit Rates, Conversion Rates, and Engagement, Attributes of Great Metrics, Web Metrics Lifecycle Process. (5+1)

4. **Web Analytics - Measuring Success:** Actionable Outcome KPIs-Task completion Rate, Share of Search, Visitor Loyalty and Recency, RSS/Feed Subscribers, % of Valuable Exits, Cart and Checkout Abandonment ,Days and Visits to Purchase, Average Order Value, Identify the Convertible, Measuring Macro and Micro Conversions, Building the action Dashboard, Consolidated Dashboard, Rules for High-Impact Dashboards. (6+1)

5. **Text Analytics:** Introduction to text Analytics, Processing and Understanding Text -Tokenization, Tagging Chunking, Stemming, Lemmatization, Applications of Text Analytics. (4)

Suggested Text Books:
1. Web Analytics 2.0: The Art of Online Accountability and Science of Customer Centricity by Avinash Kuashik
2. Web Analytics: An Hour a Day by Avinash Kuashik
3. Web Analytics Action Hero: Using Analysis to Gain Insight and Optimize Your Business by Brent Dykes
4. Practical Web Analytics for User Experience by Michael Beasley
5. Text Analytics with Python: A Practical Real-World Approach to Gaining Actionable Insights from your Data by Dipanjan Sarkar

Suggested Reference Books:
1. Social Media Marketing Step by Step: The Guides to Instagram and Facebook Marketing- Bryan Bren
2. Social Media Analytics Strategy: Using data to optimize Business Performance – Alex Goncalves
3. Effective Advertising and Social Media: Strategy and Analytics – Gerard Tellis
4. Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics by Tom Tullis, Bill Albert, Morgan Kaufmann
5. Social Media Metrics: How to Measure and Optimize Your Marketing Investment by Jim Sterne, John Wiley & Sons
6. Advanced Web Metrics with Google Analytics by Brian Clifton, John Wiley & Sons

Semester III		313 BA- Industrial Internet of Things
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO313BA.1	REMEMBERING	ENUMERATE the key concepts of industry 4.0, data science in manufacturing, operations analytics and IIOT
CO313BA.2	UNDERSTANDING	DISCUSS the value added by analytics in the operations function.
CO313BA.3	APPLYING	DEMONSTRATE the practical applications of data analytics and data science in manufacturing operations.
CO313BA.4	ANALYSING	EXAMINE the Industrial Internet of ings (IIoT) and the role of Big Data Analytics.
CO313BA.5	EVALUATING	EXPLAIN the applications of analytics in operations.
CO313BA.6	CREATING	COMPILE the issues pertaining to the adoption of technologies that will shape industry

1. **Data Science for Modern Manufacturing:** Business Analytics and Big Data Driving Organizational Change, Industry 4.0, Industrial Internet, (Industrial) Internet of Things - A Platform Built for Manufacturing, Big Data and Analytics – Hardware, Platforms. Technology & Global Trends, The data-driven manufacturer, Issues and Challenges Data Science for Modern Manufacturing – Blending analytic skills and domain expertise, Rethinking business processes, Factoring in change management, Security, Data Integration. (5+1)

2. **Machine Learning:** Basics of Machine Learning, Natural-Language Processing, Autonomous Robots, Augmented Reality, and More: Simulation, Additive Manufacturing. (5+1)

3. **Industry 4.0:** LEAN Production Systems, The Fourth Revolution, Industry 4.0: Cyber Physical Systems, Industrial Processes - Sensing & Actuation, Processing, Communication. Next Generation Sensors, Collaborative Platform and Product Lifecycle Management. (5+1)

4. **Industrial IoT- Application Domains:** Healthcare, Power Plants, Inventory Management & Quality Control, Plant Safety and Security (Including AR and VR safety applications), Facility Management. (5+1)

5. **Industrial IoT- Application Domains:** Oil, chemical and pharmaceutical industry, Applications of UAVs in Industries, Real case studies : Case study - I : Milk Processing and Packaging Industries, Case study - II: Manufacturing Industries - Part I, Case study - III : Manufacturing Industries - Part II, Case study – IV, Virtual Reality Lab, Case study - V : Steel Technology Lab(5+1)

Suggested Textbooks:
1. Data Science for Modern Manufacturing by Li Ping Chu, O'Reilly Media
2. Industry 4.0 Data Analytics Paperback by Rajesh Agnihotri, Samuel New
3. Industry 4.0: The Industrial Internet of Things by Alasdair Gilchrist
4. Industrial Internet of Things: Cyber manufacturing Systems by Sabina Jeschke, Christian Brecher, Houbing Song, Danda B. Rawat

Suggested Reference Books:
1. Advances in Business, Operations, and Product Analytics: Cutting Edge Cases from Finance to Manufacturing to Healthcare (FT Press Analytics) by Matthew J. Drake

Semester III			314BA: Supply Chain Analytics
2 Credits	LTP: 2:0:0		Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO314BA.1	REMEMBERING	DESCRIBE the importance of the basics of Supply Chain Analytics and Optimization
CO314BA.2	UNDERSTANDING	EXPLAIN the role and applications of Descriptive, Predictive & Prescriptive Analytics in a Supply Chain
CO314BA.3	APPLYING	ILLUSTRATE the basics of Modeling through R Language.
CO314BA.4	ANALYSING	EXAMINE the level of uncertainty associated with the supply of products and services to targeted customer segments and justify the choice of a supply chain strategy and its fit with competitive strategy.
CO314BA.5	EVALUATING	DETERMINE the right tools for addressing various issues in Supply Chain Analytics.
CO314BA.6	CREATING	COMBINE the various approaches to Supply Chain Analytics for improvements in the supply chain system

1. **Context of Supply Chain Analytics:** Context of today's supply chains (SC) analytics. Understanding and defining supply chain analytics (SCA). Review of Basics of Supply Chain Management, Significance of Analytics in a supply chain, Relating Operations Management with Supply Chain concepts and SC Analytics. The importance of supply chain analytics in the flows involving material, money, information and ownership. Key issues in Supply chain analytics, Case studies of Supply Chains Analytics in India. (5+1)

2. **Supplier Selection Analytics:** Linear Programming, Rating method, Ranking method, Borda Count, Clustering, Goal Programming and related multi-criterion decision making (MCDM) techniques. (5+1)

3. **Transportation Modeling and Analytics:** Transportation models, Route planning, Transshipment, Shipment schedule, Flow path optimization. (5+1)

4. **Warehousing Modeling and Analytics:** Warehouse location problem, MILP formulation, Location with foreign exchange risks, space calculation for warehouse, Non-linear optimization for warehouse space allocation.

5. **Strategic Performance Improvement:** Data Envelopment Analysis for competitive comparisons among multiple warehouses and service units and formulation of strategic action plans for improving the efficiencies of non-performing DMUs, Stochastic Frontier Analysis. (5+1)

Suggested Textbooks:
1. Unleashing the Potential of Supply Chain Analytics by Melissa R. Bowers, Adam Petrie and Mary C. Holcomb, Oreilly
2. Modeling the Supply Chain, Jeremy F. Shapiro, Duxbury Thomson Learning
3. Supply Chain Management, Sunil Chopra, and Peter Meindl, Pearson
4. Business Analytics, Rahul Saxena and Anand Srinivasan

Suggested Reference Books:
1. Designing and Managing the Supply Chain concepts, Strategies and Case studies, D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi, and Ravi Shankar, Tata McGraw Hill, New
2. Global Business Analytics Models: Concepts and Applications in Predictive, Healthcare, Supply Chain, and Finance Analytics by Hokey Min
3. Supply Chain Planning and Analytics by Gerald Feigin

Semester III		315 BA- Cognos
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO315BA.1	REMEMBERING	TELL how and when to use visualization
CO315BA.2	UNDERSTANDING	ILUSTRATE uses of crosstabs and SQL queries
CO315BA.3	APPLYING	BUILD stunning Dashboards with Cognos Analytics
CO315BA.4	ANALYSING	ILLUSTRATE the full-fledged Report Authoring tool
CO315BA.5	EVALUATING	EXPLAIN how a dashboard is different from a report, and when to use both
CO315BA.6	CREATING	DEVELOP the advanced reporting solutions which allow users to perform complex analysis tasks and interact with information

1.   **Getting started with IBM Cognos Analytics:** The user interface, Work in design, structure, or preview vie, Report layout and queries, Layout, Queries Report, objects, Find objects in a report, Relational and dimensional reporting styles, Options, Web browser settings. (5+1)
2.   **Dashboards:** Designing for mobile use, create simple Dashboards, create complex interactive Dashboards, modify Dashboards, control Dashboard data. (5+1)
3.   **Reports:** Create list reports, apply filters, use prompts, conditional formatting, calculations and macros, markers, presenting data graphically, using HTML and XML, using Crosstabs, using reusable objects, using layout control, combining multiple related objects, using interactivity. (5+1)
4.   **Active Reports:** Create report connections, using Charts, Visualizations and Decks, managing controls and variables. (5+1)
5.   **Data:** Connecting to the Data source, using Data sources, differences between using Data modules and Framework Manager packages on a report, using data shaping, creating reports using an SQL statement, using bursting. (5+1)

Suggested Text Books:
2.   IBM Cognos User Guide – IBM
3.   First Guide to Dashboards using IBM Cognos Analytics by Abhishek Sanghani

Suggested Reference Books:
1.   Going beyond Dashboards with IBM Cognos Analytics by Abhishek Sanghani
2.   IBM Cognos Business Intelligence by Dustin Adkison
3.   IBM Cognos 10 Report Studio Cookbook , by Ahmed Lashin , Abhishek Sanghani (Author)
4.   Cognos 8 BI for Consumers: A Step-by-step Introductory Guide to Cognos By Juan A. Padilla

Semester III		316BA- Predictive Modelling using SPSS Modeler
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO316BA.1	REMEMBERING	DESCRIBE what Predictive Modeling is all about and know why you would want to use it
CO316BA.2	UNDERSTANDING	EXPLAIN the CRISP-DM methodology and the IBM SPSS Modeler Workbench
CO316BA.3	APPLYING	Explore, Prepare, Model and Evaluate your data using IBM SPSS Modeler
CO316BA.4	ANALYSING	ILLUSTRATE how to use modeling skills to make decisions.
CO316BA.5	EVALUATING	FORMULATE models based on trained data, test the model with historical data, and use qualifying models on live data or other historical untested data.
CO316BA.6	CREATING	SOLVE real world problems using predictive modeling techniques on a real-world data set

1. **SPSS Modeler Professional Functionality:** SPSS Overview, SPSS Modeler Overview, Palette, purpose and use, use of SuperNodes, advantages of SPSS Modeler scripting, Business Understanding and Planning, CRISP-DM process, mapping business objectives to data mining goals. (4+1)
2. **Data Understanding:** Appropriate nodes for summary statistics, distributions, and visualizations, graph nodes, output nodes, data quality issues , outliers and missing data. (3+1)
3. **Data Preparation:** Methods for data transformation, Derive node, Auto Data Prep node, Data Audit node and Filler node, how to integrate data - Merge node and Append node, sampling, partitioning, and balancing data - Sample node, Balance node and Partition node, methods for refining data - Select node, Filter node and Aggregate node. (6+1)
4. **Modeling:** Classification models - GLM and regression, segmentation models, association models, auto modeling nodes, how to combine models using the Ensemble node. (8+1)
5. **Evaluation and Analysis:** How to interpret SPSS Modeler results - using Evaluation node, Analysis node, and data visualizations, how to use model nugget interfaces, Deployment- how to use Export nodes - tools for exporting data, how to score new data using models, SPSS Modeler reporting methods. (4+1)

Suggested Text Books:
1. IBM SPSS Modeler Essentials: Effective techniques for building powerful data mining and predictive analytics solutions by. Jesus Salcedo,. Keith McCormick

Semester III		317 BA- E Commerce Analytics - I
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO317BA.1	REMEMBERING	DESCRIBE the key concepts in e-commerce analytics.
CO317BA.2	UNDERSTANDING	DEMONSTRATE the use of analytics to drive profitability throughout the organization, and across the entire customer experience and lifecycle.
CO317BA.3	APPLYING	SOLVE the unique problems in e-commerce, and transform data into better decisions and customer experiences.
CO317BA.4	ANALYSING	DISCOVER high-value insights via dashboards and visualization.
CO317BA.5	EVALUATING	DEVELOP analytical approaches to improve ecommerce marketing and advertising, understand customer behavior, increase conversion rates, strengthen loyalty, optimize merchandising and product mix, streamline transactions, optimize product mix, and accurately attribute sales.
CO317BA.6	CREATING	FORMULATE the right analytics driven strategy for ecommerce businesses.

1.   Ecommerce Analytics: Role of Ecommerce Analytics in Creating Business Value and Driving Business Growth, The Ecommerce Analytics Value Chain, Identifying and Prioritizing Demand, Developing an Analytical Plan. Activating the Ecommerce Analytics Environment, Elements of an Ecommerce Analytics Environment, Collecting and Governing Data and Metadata. Preparing and Wrangling Data, Analyzing, Predicting, Optimizing, and Automating with Data, Socializing Analytics, Communicating the Economic Impact of Analytics. (5+1)

2.   Methods and Techniques for Ecommerce Analysis: Understanding the Calendar for Ecommerce Analysis, Storytelling, Tukey's Exploratory Data Analysis. Analyzing Ecommerce Data Using Statistics and Machine Learning. Key Performance Indicators for Ecommerce: KPI Metrics - Page or Screen Views, Visits or Sessions, Returns, Total Revenue and Revenue by N, Gross Margin, Lifetime Value, Repeat Visitors / Users / Customers. KPI Rate Metrics - Conversion Rate, Step Completion Rate, Abandoned Cart Rate; KPI Average Metrics - Average Order Value. KPI Derivative Metrics - Bounce Rate, Percentage of Orders with Promotions or Discounts, Inventory Turnover, Return on Investment, Loyalty—Time Since Last Visit (Recency), Retention—Time between Visits (Frequency). KPI Percentage Metrics - Percentage of X from Source N, Percentage of New Customers (or N Metric), KPI "Per" Metrics - Cost and/or Revenue per Visitor, Revenue per Customer, Cost per Customer Acquisition. (5+1)

3.   Visualizing, Dashboarding, and Reporting Ecommerce Data and Analysis: Understanding Reporting, Explaining the RASTA Approach to Reporting, Understanding Dashboarding, Explaining the LIVEN Approach to Dashboarding, What Data Should I Start With in an Ecommerce Dashboard?, Understanding Data Visualization, The Process for Data

Visualization, Maximizing Impact with Data Visualization: The SCREEN Approach and More, Why Use Data Visualizations?, Types of Data Visualization. (5+1)

4.   Ecommerce Analytics Data Model and Technology: Understanding the Ecommerce Analytics Data Model- Facts and Dimensions, Sample Ecommerce Data Model, Understanding the Inventory Fact, Understanding the Product Fact, Understanding the Order Fact, Understanding the Order Item Fact, Understanding the Customers Fact, Understanding the Customer Order Fact, Reviewing Common Dimensions and Measures in Ecommerce. (5+1)

5.   Marketing and Advertising Analytics in Ecommerce: Understanding the Shared Goals of Marketing and Advertising Analysis, Reviewing the Marketing Lifecycle, Understanding Types of Ecommerce Marketing, Analyzing Marketing and Advertising for Ecommerce, What Marketing Data Could You Begin to Analyze? **Analyzing Behavioral Data:** Answering Business Questions with Behavioral Analytics, Understanding Metrics and Key Performance Indicators for Behavioral Analysis, Reviewing Types of Ecommerce Behavioral Analysis, Behavioral Flow Analysis, Shopping Behavior Analysis, Content Analysis, In-Page or On-Screen Behavior Analysis. (5+1)

Suggested Text Books:
1.   Ecommerce Analytics: Analyze and Improve the Impact of Your Digital Strategy by Judah Phillips
2.   Building a Digital Analytics Organization: Create Value by Integrating Analytical Processes, Technology, and People into Business Operations by Judah Phillips

Subject Core (SC) Courses - Semester IV Specialization: Business Analytics		

Semester IV		403 BA- Economics of Network Industries
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO403BA .1	REMEMBERING	APPRECIATE the differences in the nature of information goods as opposed to traditional goods and services.
CO403BA .2	UNDERSTANDING	DESCRIBE the characteristics of the markets for network products.
CO403BA .3	APPLYING	ILLUSRTRATE the characteristics of the cost structure of information goods and its implications for pricing of information goods w.r.t. price discrimination, versioning of information goods, and bundling
CO403BA .4	ANALYSING	COMPARE and CONTRAST the pros and cons of keeping products compatible, and strategic aspects of the decision regarding compatibility.
CO403BA .5	EVALUATING	EVALUATE the role of complementary products, compatibility and standards, switching costs and lock-in in network industries.
CO403BA .6	CREATING	DISCUSS the economics of Internet advertising, and the business model of zero pricing.

1.   **Network Economics:** Introduction, information goods and services, traditional goods and services, Overview of Network Industries, Demand side economies of scale - Network externality, Supply side economics of scale - Increasing returns. Systems effect in information industry, Network effects in physical (telecommunication) and virtual (systems) networks; Internalizing the network externality – gateways, adapters and standards. (7+2)
2.   **Analyzing the hardware & software industry**: Analyzing the hardware industry - Hardware Compatibility, Network externalities approach, The Components approach. Analyzing the software industry - Principles of Software Production, Determinants of Software variety, Software variety under hardware competition, Software Variety and Partial Compatibility, Software Piracy, Software Pricing and Market Segmentation. (7+2)
3.   **Technology advance and standardization:** New Technology Adoption – Static Approach, Technology Revolutions – Dynamic Approach, patents, licensing and standardization in network industries.
4.   **Industry Reviews- I:** Economics of the Telecommunication Industry, Interconnections, Broadcasting and Cable Television, Spectrum Allocation, Digital Convergence, Markets for Information – Information reproduction, Economics of Libraries, Pricing Information Goods. (7+2)
5.   **Industry Reviews – II:** Banks and Money – Switching costs and Competition, ATMs, Media of Exchange as Networks. Airline Industry – Network Structure and Network Economies, Deregulation and Entry, Code Sharing Agreements. Social Intercation – Status Seeking versus Conformism, Conformity, Vanity and Price Competition, Economics of Entertainment Places, Gifts. Languages as Networks, Religious Affiliations as Networks. (7+2)

Suggested Text Books:
1.   The Economics of Network Industries by Oz Shy
2.   Information Rules: A Strategic Guide to the Network Economy by Carl Shapiro and Hal R. Varian

Semester IV		404 BA- Artificial Intelligence in Business Applications
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404BA .1	REMEMBERING	IDENTIFY KNOWLEDGE associated and represent it by logical sequence and plan a strategy to solve given problem
CO404BA .2	UNDERSTANDING	UNDERSTAND AI's fundamental concepts and methods.

CO404BA .3	APPLYING	APPLY various machine learning algorithms on structured data to develop machine learning models.
CO404BA .4	ANALYSING	ACQUIRE advanced Data ANALYSIS SKILLS through algorithm and search processes.
CO404BA .5	EVALUATING	SELECT logical and functional process to develop the model
CO404BA .6	CREATING	CREATE SOLUTIONS for various business problems using AI techniques.

1.   **Introduction to AI and Programming Tools:** Analytics Landscape, Complexity of Analytics, What Is Artificial Intelligence? Embedding AI into Business Processes, Basic Concepts of Artificial Intelligence Brain Science and Problem Solving, The History of AI,   Benefits of AI Data Pyramid Property of Autonomy, The AI Revolution, Business Innovation with Big Data and Artificial Intelligence. AI and Predictive Analytics, Overlapping of Artificial Intelligence with Other Fields Ethics and Privacy Issues, Application Areas, AI and Society. Knowledge-Based Systems Knowledge Based Reasoning: Agents, Facets of Knowledge. (7)

2.   **Logic and Inferences:** Formal Logic, Propositional and First Order Logic, Resolution in Propositional and First Order Logic, Deductive Retrieval, Backward Chaining, Second order Logic. Knowledge Representation: Conceptual Dependency, Frames, Semantic nets. Reasoning Systems for Categories, Reasoning with Default Information. Propositional Logic & Predicate logic - Syntax., Semantics , Computability and Complexity Applications and Limitations, Logic for Problem solving, Logic Programming with PROLOG , PROLOG Systems and Implementations, Execution Control and Procedural Elements, Constraint Logic Programming, Simple Examples (8)

3.   **Problem Solving, Search and Game Techniques:** Problem solving with AI, Study and analysis of various searching algorithms, Local Search in Continuous Spaces, Searching with Non-deterministic Actions General Problem Solver, Gelernter's Geometry Theorem, STRIPS, ABSTRIPS, Search - Overview, Problem representation State-space representation, Problem-reduction representation, Uninformed Search - Blind state-space search, Breadth-First Search, Uniform-cost search, Depth-First Search, Iterative Deepening, Heuristic Search, Greedy Search , A★-Search ,IDA★-Search. Games with Opponents- Minimax Search, Alpha-Beta-Pruning Non-deterministic Games. Heuristic Evaluation Functions Game trees, optimal search for an optimal solution. Conditions for optimality: Admissibility and consistency, Optimality of A*, Optimization Problems: Hill-climbing search Simulated annealing, Local beam search, Recursive Best First Search, Pruning the CLOSED and OPEN Lists (10)

4.   **Machine Learning and Data Mining:** Introduction - What is machine learning?, Supervised vs. unsupervised learning , Reinforcement Learning. Machine Learning Workflow, Learning Algorithms, Linear Regression k-Nearest Neighbor , Decision Trees, Feature Construction and Data Reduction ,Random Forest, k-Means Algorithm, Gradient Boosting, Analyzing Big Data Different Deep Learning Models, Auto encoders, Data Analysis, The Perceptron, a Linear Classifier, The Learning Rule, Optimization and Outlook , The Nearest Neighbor Method, Two Classes, Many Classes, Approximation, Case-Based Reasoning, Decision Tree Learning, Entropy as a Metric for Information Content, Learning of Appendicitis Diagnosis, Cross-Validation and Over fitting, Learning of Bayesian Networks, Learning the Network Structure, The Naive Bayes Classifier, Clustering ,Hierarchical Clustering, Data Mining in Practice (10)

5.   **Natural language processing & Neural Networks:** Introduction to Natural Language Processing, Stages in NLP, NLP Models, Morphological Processing - Syntax and Semantics, Text Analytics, Sentiment Analysis, Syntactic Analysis (Parsing), Semantic interpretation, Discourse and pragmatic Processing, Text Classification, Implementation aspects of Syntactic Analysis (Parsing), Application of NLP in Machine Translation, Information Retrieval and Big Data Information Retrieval. Learning: Supervised, Unsupervised and Reinforcement learning. Use Cases of NLP, Applications of NLP in Business Customer Service, Reputation Monitoring. Market Intelligence, Sentiment Technology in Business. Artificial Neural Networks - Concept, Feed forward and Feedback ANNs, Error Back Propagation, Boltzmann Machine, Deep Neural Network and Tools, Hopfield Networks , Application to a Pattern Recognition Example, Neural Associative Memory , Linear Networks with Minimal Errors, Applications of Neural Network (10)

Suggested Text Books:
1.   Introduction to Artificial Intelligence by Wolfgang Ertel, Springer, Translated by Nathanael Black
2.   Artificial Intelligence by Elaine Rich, Kevin Knight and Nair, TMH
3.   A First Course in Artificial Intelligence by Deepak Khemani, McGraw Hill Education(India)

Suggested Reference Books:
1.   Artificial Intelligence: A Modern Approach by Stuart Russell and Peter Norvig, Pearson
2.   Artificial Intelligence by Saroj Kausik, Cengage Learning
3.   Artificial Intelligence by Dan W Patterson, Prentice Hall of India

4.   Artificial Intelligence and Intelligent Systems by Padhy, Oxford University Press

Subject Elective (SE) Courses - Semester III
Specialization: Business Analytics

Semester IV		**409 BA- E Commerce Analytics - II**
2 Credits	**LTP: 2:1:1**	**Subject Elective (SE) Course – Business Analytics**

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO409BA.1	REMEMBERING	DESCRIBE the key concepts in e-commerce analytics.
CO409BA.2	UNDERSTANDING	DEMONSTRATE the use of analytics to drive profitability throughout the organization, and across the entire customer experience and lifecycle.
CO409BA.3	APPLYING	SOLVE the unique problems in e-commerce, and transform data into better decisions and customer experiences.
CO409BA.4	ANALYSING	DISCOVER high-value insights via dashboards and visualization.
CO409BA.5	EVALUATING	DEVELOP analytical approaches to improve ecommerce marketing and advertising, understand customer behavior, increase conversion rates, strengthen loyalty, optimize merchandising and product mix, streamline transactions, optimize product mix, and accurately attribute sales.
CO409BA.6	CREATING	FORMULATE the right analytics driven strategy for ecommerce businesses.

1.   **Optimizing for Ecommerce Conversion and User Experience:** The Importance of the Value Proposition in Conversion Optimization, Basics of Conversion Optimization: Persuasion, Psychology, Information Architecture, and Copywriting, Conversion Optimization Process: Ideation to Hypothesis to Post-Optimization Analysis, Data for Conversion Optimization: Analytics, Visualization, Research, Usability, Customer, and Technical Data, Science Behind Conversion Optimization, Succeeding with Conversion Optimization. (5+1)

2.   **Analyzing Ecommerce Customers:** Customer Record in Ecommerce, Types of Customer Data to Analyze. Questioning Customer Data with Analytical Thought, Ecommerce Customer Analytics Lifecycle. Defining the Types of Customers, Reviewing Types of Customer Analytics. Segmenting Customers, Performing Cohort Analysis. Calculating Customer Lifetime Value, Determining the Cost of Customer Acquisition, Analyzing Customer Churn. Understanding Voice-of-the-Customer Analytics - Doing Recency, Frequency, and Monetary Analysis. Determining Share of Wallet, Scoring Customers, Predicting Customer Behavior, Clustering Customers, Predicting Customer Propensities, Personalizing Customer Experiences. (5+1)

3.   **Analyzing Products and Orders in Ecommerce:** Ecommerce Orders, Order Data to Analyze, Metrics and Key Performance Indicators Relevant for Ecommerce Orders. Approaches to Analyzing Orders and Products. - Financial Analysis, Product and Item Analysis, Promotional Analysis, Category and Brand Analysis, Event and Goal Analysis, Path-to-Purchase Analysis, Funnel Analysis, Cluster Analysis, Up-Sell and Cross-Sell Analysis, Next-Best-Action Analysis. Analyzing Products in Ecommerce, Useful Types of Product Analysis for Ecommerce - Product Brand Analysis, Product Category Analysis, Customer Service Analysis, Product Returns Analysis, Social Media Product Analysis. Analyzing Merchandising in Ecommerce - Testing Merchandising Creative, Performing Inventory Analysis, Analyzing Product Offers, Determining the Optimal Price via Pricing Analysis, Understanding the Sales Impact of Merchandising, Analyzing Suppliers and the Supply Chain, Determining Effective and Profitable Markdowns, Promotions, and Discounts. (8+1)

4.   **Attribution in Ecommerce Analytics:** Attributing Sources of Buyers, Conversion, Revenue, and Profit, Understanding Engagement Mapping and the Types of Attribution, The Difference between Top-Down and Bottom-Up Approaches to Attribution, A Framework for Assessing Attribution Software. (2+1)

5.   **Integrating Data and Analysis to Drive Ecommerce Strategy:** Defining the Types of Data. Single-Channel to Omnichannel, Integrating Data from a Technical Perspective. Agile Versus Waterfall Delivery, Integration with Operational Data Stores, Integration with On-Premises Enterprise Data Warehouses. Integration with Cloud Data Sources, Integration with Data Lakes, Integration with Data Federation, Integration with Data Virtualization, Integrating Analytics Applications, Integrating Data from a Business Perspective. (5+1)

Suggested Text Books:
1. Ecommerce Analytics: Analyze and Improve the Impact of Your Digital Strategy by Judah Phillips
2. Building a Digital Analytics Organization: Create Value by Integrating Analytical Processes, Technology, and People into Business Operations by Judah Phillips

Semester IV		410BA: Healthcare Analytics
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO410BA.1	REMEMBERING	DESCRIBE the key terms in healthcare data analytics
CO410BA.2	UNDERSTANDING	EXPLAIN the fundamental concepts in Health Care Analytics
CO410BA.3	APPLYING	ILLUSTRATE the use of specific tools and techniques to design effective ways of handling, retrieving, analyzing, and making use of healthcare data
CO410BA.4	ANALYSING	EXAMINE the issues associated with the applications of intelligent data acquisition, processing, and analysis of healthcare data
CO410BA.5	EVALUATING	EXPLAIN the perspectives of healthcare related opportunities for developing new analytical approaches.
CO410BA.6	CREATING	ADAPT healthcare data analytics for improving the health and well-being of people.

1.   **Introduction to Healthcare Data Analytics:** Introduction, Healthcare Data Sources and Basic Analytics, Electronic Health Records, Biomedical Image Analysis, Sensor Data Analysis, Biomedical Signal Analysis, Genomic Data Analysis, Clinical Text Mining. Mining Biomedical Literature, Social Media Analysis, Advanced Data Analytics for Healthcare, Clinical Prediction Models, Temporal Data Mining, Visual Analytics, Clinico–Genomic Data Integration, Information Retrieval, Privacy-Preserving Data Publishing. Applications and Practical Systems for Healthcare, Data Analytics for Pervasive Health, Healthcare Fraud Detection, Data Analytics for Pharmaceutical Discoveries, Clinical Decision Support Systems,Computer-Aided Diagnosis, Mobile Imaging for Biomedical, Resources for Healthcare Data Analytics. (5+1)

2.   **Electronic Health Records:** History of EHR , Components of EHR , Administrative System Components, Laboratory System Components & Vital Signs, Radiology System Components, Pharmacy System Components, Computerized Physician Order Entry (CPOE). Clinical Documentation, Coding Systems, International Classification of Diseases (ICD), Current Procedural Terminology (CPT), Systematized Nomenclature of Medicine Clinical Terms (SNOMED-CT), Logical Observation Identifiers Names and Codes (LOINC), RxNorm, International Classification of Functioning, Disability, and Health (ICF), Diagnosis-Related Groups (DRG), Unified Medical Language System (UMLS). Digital Imaging and Communications in Medicine (DICOM), Benefits of EHR - Enhanced Revenue, Averted Costs, Additional Benefits, Barriers to Adopting HER, Challenges of Using EHR Data. (5+1)

3.   **Social Media Analytics for Healthcare:** Social Media Analysis for Detection and Tracking of Infectious Disease Outbreaks, Outbreak Detection, Using Search Query and Website Access Logs, Using Twitter and Blogs, Analyzing and Tracking Outbreaks, Syndromic Surveillance Systems Based on Social Media, Social Media Analysis for Public Health Research. Topic Models for Analyzing Health-Related Content, Detecting Reports of Adverse Medical Events and Drug Reactions, Characterizing Life Style and Well-Being, Analysis of Social Media Use in Healthcare , Social Media as a Source of Public Health Information, Analysis of Data from Online Doctor and Patient Communities. (5+1)

4.   **Visual Analytics for Healthcare:** Introduction to Visual Analytics and Medical Data Visualization, Clinical Data Types, Standard Techniques to Visualize Medical Data, High-Dimensional Data Visualization, Visualization of Imaging Data,. Visual Analytics in Healthcare, Visual Analytics in Public Health and Population Research, Geospatial Analysis, Temporal Analysis, Beyond Spatio-Temporal Visualization, Visual Analytics for Clinical Workflow, Visual Analytics for Clinicians, Temporal Analysis, Patient Progress and Guidelines, Other Clinical Methods, Visual Analytics for Patients, Assisting Comprehension, Condition Management, Integration into Healthcare Contexts. (5+1)

5.   **Fraud Detection in Healthcare:** Understanding Fraud in the Healthcare System, Definition and Types of Healthcare Fraud, Identifying Healthcare Fraud from Data. Types of Data, Challenges, Knowledge Discovery-Based Solutions for Identifying Fraud, Identifying Fraudulent Episodes, Identifying Fraudulent Claims - Bayesian Approach & Non-Bayesian Approaches to Identifying Fraudulent Claims. Identifying Fraudulent Providers, Analyzing Networks for Identifying Coordinated Frauds, Constructing a Provider Social Network, Relevance for Identifying Fraud, Temporal

Modeling for Identifying Fraudulent Behavior, Change-Point Detection with Statistical Process Control Techniques, Anomaly Detection Using the CUSUM Statistic, Supervised Learning for Classifying Provider Profiles. (5+1)

Suggested Text Books:
1. Healthcare Data Analytics Edited by Chandan K. Reddy & Charu C. Aggarwal, CRC press.
2. Healthcare Analytics Made Simple by Vikas Kumar, Packt Publishing
3. Healthcare Analytics: From Data to Knowledge to Healthcare Improvement by Hui Yang & Eva K. Lee
4. Healthcare Management and Administration, S.L. Goel, Deep & Deep Publications Pvt. Ltd. New Delhi.
5. Introduction To Health Care Management , Sharon B. Buchbinder , Nancy H. Shanks, Malloy Incorporation.

Semester IV		411 BA- Watson
2 Credits	LTP: 2:1:1	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO411BA.1	REMEMBERING	RECALL the key aspects of cognitive computing and Watson.
CO411BA.2	UNDERSTANDING	DESCRIBE & DISCUSS the conceptual components and practical aspects of a cognitive system.
CO411BA.3	APPLYING	MAKE USE OF Watson platform and its underlying technologies for natural language processing and question answering in particular.
CO411BA.4	ANALYSING	ILLUSTRATE the various use cases of Watson.
CO411BA.5	EVALUATING	EXPLAIN fundamentals of IBM Cloud and creating service instances.
CO411BA.6	CREATING	BUILD a Customer Complaints Analyzer using Watson Natural Language Understanding.

1. **Introduction to cognitive computing:** Cognition, Cognitive system and its main features, why build cognitive systems? The eras of computing, differences between cognitive systems and traditional development, different computing paradigms for solving problems, changing focus from rules definition and development to data analysis and training, conceptual components of a cognitive system, overview of Watson as a cognitive system, brief history of Watson , current status of Watson and the way of using it. Impact of cognitive computing to our lives, Solving real life problems with cognitive systems, Cognitive computing and the future of jobs. (5+1)
2. **Cognitive business and IBM Watson:** Landscape of cognitive computing in the industry, Consumer market: Cognitive computing offerings, Enterprise market: Cognitive computing offerings, Delivering cognitive services: Cloud and open source projects/IBM Watson, Watson APIs: APIs available in IBM Cloud. High level categorization of API functionality, summary of natural language and empathy APIs, signal processing APIs, data analysis services, demos of the APIs, IBM Watson applied to industries, businesses, and science. (5+1)
3. **Introduction to question-answering systems:** The Jeopardy! Challenge, DeepQA system architecture, Exploring the DeepQA pipeline, Question analysis, Primary search, Hypothesis generation, Hypothesis and evidence scoring, Final merging and ranking. (5+1)
4. **Evolution from DeepQA to Watson Developer Cloud :** Why commercialize Watson, Refresher of DeepQA architecture, Evolution to Watson Developer Cloud, Evolution of question analysis, Micro-services and robust tooling evolved from DeepQA, Watson Conversation service, Watson Discovery service, Evolution summary. (5+1)
5. **Domain adaptation:** Introduction to domain adaptation, IBM Watson Developer Cloud and domain adaptation, Watson Conversation, Watson Language Translator, Watson Natural Language Classifier, Watson Retrieve and Rank, Watson Visual Recognition, Watson Speech to Text, Watson Text to Speech, Watson Natural Language Understanding, Watson Discovery, Watson Knowledge Studio domain adaptation overview. Creating a machine learning model, Deploying a machine-learning annotator to Watson Natural Language Understanding, Deploying a machine-learning annotator to Watson Discovery. (5+1)

Suggested Text Books:
1. IBM's Watson and the Era of Cognitive Computing by Kelly, John E., and Steve Hamm, Columbia Business School Publishing.

Suggested Reference Books:
1. Cognitive Computing: A Brief Guide for Game Changers by Fingar, Peter. , Meghan-Kiffer Press.

2. Life 3.0: Being Human in the Age of Artificial Intelligence by Max Tegmark., Knopf
3. Artificial Intelligence for Humans: Deep Learning and Neural Networks, Heaton, Jeff.

Semester IV		412 BA- Scala and Spark
2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – Business Analytics

Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO412BA.1	REMEMBERING	DESCRIBE the ecosystem associated with SCALA and SPARK.
CO412BA.2	UNDERSTANDING	ILLUSTRATE the use of SPARK and SCALA.
CO412BA.3	APPLYING	USE the core RDD and DataFrame APIs to perform analytics on datasets with Scala.
CO412BA.4	ANALYSING	EXAMINE how and when it differs from familiar programming models
CO412BA.5	EVALUATING	READ data from persistent storage and load it into Apache Spark.
CO412BA.6	CREATING	MANIPULATE data with Spark and Scala

1.   Scala: What is Scala? Why Scala for Spark? Scala in other frameworks Introduction to Scala REPL, Basic Scala operations, Variable Types in Scala, Control Structures in Scala, Foreach loop Functions, Procedures, Collections in Scala- Array, Array Buffer, Map, Tuples, Lists. **Spark Core:** Introduction, Introduction to big data, Challenges with big data, Batch Vs. Real Time big data analytics, Batch Analytics - Hadoop Ecosystem Overview, Real-time Analytics. (7+1)
2.   What is Spark? : Spark Ecosystem, Modes of Spark, Spark installation demo, Overview of Spark on a cluster, Spark Standalone cluster, Spark Web UI, Components of Spark Unified stack, Spark Streaming, MLlib, Core, Spark SQL, RDD - The core concept of Spark RDDs, Transformations in RDD, Actions in RDD. Loading data in RDD, Saving data through RDD, Key-Value Pair RDD, MapReduce and Pair RDD, Operations Scala and Python shell Word count, example Shared Variables with examples, Submitting jobs in cluster, Hands on examples. (5+1)
3.   Spark SQL: Overview, Hive and Spark SQL architecture, sqlContext in spark sql, Dataframes API, Understanding concept of data frame, Loading data in dataframe, Operations on dataframes. Interaction with Hive, Reading various data formats Hands on Examples.(4+1)
4.   Spark Streaming: Overview of streaming, Spark Streaming Architecture, First Spark Streaming Program, Transformations in Spark Streaming, checkpointing, Parallelism level, Introduction to queuing systems. Eg. Kafka, Hands on examples. (4+1)
5.   Spark MLlib: Supervised Learning, Classification - logistic regression, decision trees, random forests, naive Bayes, Regression - linear least squares, Lasso, ridge regression, decision trees, Unsupervised learning : Clustering - K-means, Gaussian Mixture, Dimensionality reduction – PCA, Hands on examples. (5+1)

Suggested Text Books:
1. Scala and Spark for Big Data Analytics: Explore the Concepts of Functional Programming, Data Streaming, and Machine Learning by Md. Rezaul Karim and Sridhar Alla
2. Programming in Scala by Bill Venners and Martin Odersky

Suggested Reference Books:
1. Scala Cookbook: Recipes for Object-Oriented and Functional Programming by Alvin Alexander
2. Scala in Depth by Josh Suereth

Syllabus for Rural & Agri Business Management (MINOR ONLY SPECIALIZATION)

Semester III		SC – RABM – 01 Agriculture and Indian Economy
3 Credits	LTP: 2:1:1	**Rural & Agri Business Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM01.1	REMEMBERING	DEFINE the key terms in Indian Agriculture/Land Reforms/ economic holding.
RABM01.2	UNDERSTANDING	EXPLAIN the key terms in The place of agriculture in the national economy/ The present position of Indian Agriculture with an advanced management perspective.
RABM01.3	APPLYING	IDENTIFY the various issues in the Agriculture Industry in India. DEMONSTRATE their significance from the perspective of Indian farmer & Indian Economy & business decision making.
RABM01.4	ANALYSING	EXAMINE the inter-relationships between various facets of Agriculture & economy from the perspective of a farmer, Labour, firm, industry, market, competition and business cycles.
RABM01.5	EVALUATING	DEVELOP critical thinking based on changing pattern of ownership and operational holdings in India, Farms size, Productivity/ Profitability and farm efficiency
RABM01.6	CREATING	ANTICIPATE how other firms in an industry and consumers will respond to economic decisions made by a business, and how to incorporate these responses into their own decisions.

1.   **Indian Agriculture under the Five Year Plans :** The Green Revolution, The place   of agriculture in the national economy, progress of agriculture under the Five Year   Plans, Present position of Indian Agriculture : Looming Crisis, New Thrust Areas in Agriculture, National Commissions of Farmers and Green Revolution, Crop Pattern in   India since 1951.

2.   **Food Security in India:** Green Revolution, Second Green Revolution – the future   prospects, Concept of Food Security , Food self-sufficiency and food security,   Poverty and need for Public Distribution Systems, Policy Options for reforms of PDS, Food Insecurity at Global level, Food Security Act – Salient features and implications.

3.   **Irrigation and other agricultural inputs:** Irrigation, multipurpose river valley project - a controversy, irrigation in the 12th plan, private sector participation in irrigation, fertilizers and manures, improved seeds, soil conservation and reclamation, livestock   and dairy development, mechanization of agriculture

4.   **Land Reforms:** The need and scope for land reforms in a developing economy, the   abolition of intermediaries, tenancy reforms, ceiling on land holdings, an appraisal of land reforms. Size of Farms and Productive Efficiency: Meaning of economic holding, changing   pattern of ownership and operational holdings in India, Farms size, Productivity/ Profitability and farm efficiency, the problem of sub division and fragmentation of   holdings, cooperative farming.

5.   **Agriculture Labour:** Present position of agricultural Labour in India, Agricultural   Labour and Minimum Wages, Abolition of Bonded Labour, Recommendations of   National Commissions on Rural Labour (NCRL)

Suggested Text Books:
1. Indian Economy, Datt and Sundharam, S Chand
2. Indian Economy Since Independence, edited by Uma Kapila, Academic Foundation
3. Indian Agriculture - issues and perspectives, Edited by N Janardhana Rao, ICFAI   University Press

Suggested Reference Books:
1. Adhikary M. 1986. *Economic Environment of Business*. S. Chand & Sons.
2. Aswathappa K. 1997. *Essentials of Business Environment*. Himalaya Publications
3. Francis Cherunilam 2003. *Business Environment*. Himalaya Publications

Semester IV		SE – RABM – 02 ICT for Agriculture Management
3 Credits	LTP: 2:1:1	Rural & Agri Business Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM02.1	REMEMBERING	RECALL the basic terminologies related to ICT
RABM02.2	UNDERSTANDING	UNDERSTAND the use of ICT with different aspects & various issues & challenges for ICT information services
RABM02.3	APPLYING	Apply the GIS Applications in micro resource mapping
RABM02.4	ANALYSING	ANALYZE the different tools and techniques used under ICT in Agriculture Management
RABM02.5	EVALUATING	EVALUATE the common ICT platforms for information services
RABM02.6	CREATING	CHOOSE the right ICT as per the requirement of agriculture activity

1. Introduction : Basic terminology , Recent history of adoption of ICT in developing countries , Leapfrogging technology – the mobile phone , ICT and its ramifications for rural economies , Introduction to various ICT enabled rural services related to land, education, health, insurance, micro-credit, marketing etc. Village Resource Centre (VRC), Common resource Centre (CRC), Tele- education, community radio etc. Potential impact

2. ICT for production systems management : Types of ICT information service, , Short-term productivity information services , Crisis management information services , Long-term productivity information services , Risk management information services , Common ICT platforms for information services , Collection and analysis , Delivery , Issues and challenges for ICT information services , Advantages of and opportunities for ICT information services

3. ICT for market access: Types of market access ICT service, Pricing services , Virtual trading floors , Holistic trading services, Downstream (and upstream) administration , Issues and challenges for market access ICT services , Advantages of and opportunities for market access ICT services

4. ICT for financial inclusion: Types of financial inclusion, ICT services , Transfers and payments , Agricultural credit , Savings for agricultural needs , Insurance , Common ICT platforms for financial inclusion services , Issues and challenges for ICT financial inclusion services , Advantages of and opportunities for ICT financial inclusion services.

5. Overview of Geographical Information Systems (GIS): Remote Sensing and Image Processing, GPS, GIS Data Modeling, Geographical Information Systems, Issues and Concerns in Land and Water Management, The GIS Approach. Planning and Implementing a GIS; Case studies on GIS; GIS and Precision farming; GIS Applications in micro resource mapping, principles in micro planning, modeling in resource mapping GIS Technology trend and next generation Systems.

Suggested Text Books:
1. Sustainable Agriculture, edited by A. Bandyopadhyay, Bhoovigyan Vikas Foundation
2. Concepts and Techniques of Geographic Information Systems , Lo, C.P. and Yeung, A.K.W. (2002)., Prentice Hall.
3. E- Governance Concepts and case Studies- C.S.R Prabhu , Prentice Hall of India

Suggested Reference Book:
1. Cases on Developing Countries and ICT Integration: Rural Community Development ,edited by Rebecca Nthogo Lekoko, Ladislaus M. Semali, IGI
2. Fundamentals of Geographic Information Systems. DeMers, M.N. (1999) 2nd Ed., Wiley Press.
3. Principles of Geographical Information Systems Burrough, P.A. and R.A. McDonald (1998), Oxford University Press

Semester III		SE – RABM – 03 Rural Credit and Finance
2 Credits	**LTP: 1:1:1**	**Rural & Agri Business Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM03.1	REMEMBERING	RECALL the Role of Credit in Agriculture & Role of Agriculture in Economic Development
RABM03.2	UNDERSTANDING	UNDERSTAND the concept and special features of co-operative banking, Structure of the co-operative credit system in India
RABM03.3	APPLYING	Apply the theories of Agricultural finance with concept of credit
RABM03.4	ANALYSING	ANALYZE Players and Approaches in Microfinance & Rural Finance.
RABM03.5	EVALUATING	EXPLAIN the triangle of microfinance and the role of BDS in rural finance.
RABM03.6	CREATING	Develop a plan to create awareness about different rural finance schemes

1. Role and Characteristics of Indian Agriculture: Introduction, Role of Agriculture in Economic Development, Characteristics of Indian Agriculture.

2. Critical Review of Agricultural Finance: Role of Credit in Agriculture, Agricultural Finance in India, Classification of Agricultural Finance, Significance of Co-op. Credit, Some Issues of the Present System. **Financial Intermediaries In Agriculture:** Functions, Structure and Performance.

3. Cooperative Banks: Concept and special features of co-operative banking, Structure of co-operative credit system in India, Primary Level Credit Institutions (PACs, LAMPs. MPCS, FSS) their functioning and problems, District Central Cooperative Banks Structure and functions , Apex Co-operative Banks Structure and functions , Impact of liberalization on Co-operative Banks with particular reference to de regulation of interest rates and prudential norms

4. **Theories of Agricultural Finance:** Risk and Uncertainty Theory, Demand and Supply Theory, Business Vs. Social and Moral Theory, Cost Theory, Productive Vs. Consumption, – The concept of 3 C's, 7 P's and 3 R's of credit, Credit Analysis, Kind Loans Vs. Cash Loans, Principle of Micro- and Macro-Finance, Principle of Supervised Credit, Principle of Crop Loan, Principle of Co-op. Credit, Principle of Better Credit.

5 **Rural Finance and Microfinance:** Players and Approaches; Microfinance& Rural Finance – Lessons from microfinance and historical interventions, Rural finance: approach, delivery channels and actors involved, and linkages, Triangle of microfinance and the role of BDS in rural finance.

Suggested Text Books:
1. Agricultural Development Rural Credit And Problems Of Its Recovery, By A. Ranga Reddy, Mittal Publications

Suggested Reference Book:
1. Theories of Agricultural Finance, Jugale, Atlantic Publishers
2. Barry, P.J., and P.N. Ellinger. Financial Management in Agriculture. 7th ed. Pearson Education, Inc., 2012.
3. Ross, S.A., R.W. Westerfield, B.D. Jordan. "Essentials of Corporate Finance. The McGraw-Hill/Irvin, 2011.
4. Keown, A.J., J.D. Martin, J.W. Petty, and D.F. Scott. Foundations of Finance. 7th ed. Prentice Hall, 2010.

Semester IV		SC – RABM – 04 Rural Marketing – I
2 Credits	LTP:1:1:1	**Rural & Agri Business Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM04.1	REMEMBERING	RECALL and REPRODUCE the various concepts, principles, frameworks, and terms related to the function and role of marketing in Rural areas.
RABM04.2	UNDERSTANDING	DISCUSS the Rural versus Urban Marketing concept and ILLUSTRATE the role that marketing plays in the 'tool kit' of a Rural Marketer
RABM04.3	APPLYING	APPLY the models of consumer behavior in the rural market
RABM04.4	ANALYSING	EXAMINE and LIST different aspects of segmentation, targeting and positioning, marketing environmental forces, consumer buying behavior, in the context of rural marketing
RABM04.5	EVALUATING	EVALUATE the challenges of Rural marketing research with different approaches and tools
RABM04.6	CREATING	CREATE a new consumer behavior model on the rural consumer with the help of cases with rural marketing experiences

1. Rural Marketing Opportunities: What is a Rural Market?, Taxonomy of the Rural Market, Go Rural Decision, Rural Inhibiting factors, Approach Decision: Rural Marketing Models, Bottom of the Pyramid Approach, Integrated, Innovation and Inclusive – Growth Model, Evolution and Scope, Rural versus Urban Marketing, Becoming a Rural Marketer, Testing rural marketing potential.

Understanding the Rural Economy: Rural marketing Environment, social environment, economic environment, technological environment, innovations, political environment and development initiatives, implications on rural marketers

2. Rural marketing experiences: Case of HUL – Project Shakti, Case of CFCL – Uttam Bandhan, Case of ITC – e-Choupal, Case of Colgate – Education, Case of HLL – Social Marketing, lessons from experience

3. **Rural Consumer Behavior**: Rural consumer on the growth, models of consumer behavior, buying decision process, Opinion Leaders, Environmental factors influencing the decision making process, buyer characteristics, buying behavior patterns, brand loyalty, innovation adoption

4. **Rural Marketing Research**: Significance of information, sources of information, marketing research – key decisions, approaches and tools – case for innovation, participatory approaches, innovative tools, rural versus urban marketing research, rural research business, challenges in rural marketing research.

5. **Selecting and Attracting Markets:** Concepts and process, case for segmentation, bases for segmentation, emerging segments – women and youth, guides to effective segmentation, targeting, positioning, Case Study.

Suggested Text Books:
1. Rural Marketing – Text and Cases, Krishnamacharyulu and Ramakrishnan, Pearson
2. Rural Marketing – Concept and Practices, Dogra and Ghuman, TMGH
3. Rural Marketing, Velayudhan, Sage
4. Rural Marketing, Gopalaswamy, Vikas Publishing house
5. Rural Marketing in India, Habeeb - ur – Rahman, Himalaya Publishing House
6. Rural Marketing Text and Cases, S L Gupta, Wisdom Publications

Suggested Reference Book:
1. Singh AK &Pandey S. 2005. Rural Marketing. New Age.SinghSukhpal. 2004.
2. Rural Marketing. Vikas Publishing House.

Semester IV		SE – RABM – 05 Agri – Entrepreneurship
2 Credits	LTP: 1:1:1	Rural & Agri Business Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM05.1	REMEMBERING	DEFINE the term rural entrepreneurship and ENUMERATE factors that support women's participation in rural entrepreneurship
RABM05.2	UNDERSTANDING	UNDERSTAND the Process of entrepreneurship, aims, and barriers
RABM05.3	APPLYING	APPLY different ICT in Rural entrepreneurship development.
RABM05.4	ANALYSING	Analyze the importance of IT in rural India and role of entrepreneur in rural development.
RABM05.5	EVALUATING	EVALUATE the rural capabilities, Endowment of Skill sets and Natural resources in rural India
RABM05.6	CREATING	Design the business plan, factors considering rural development & Rural BPO

1. Rural Entrepreneurship: Concept of rural entrepreneurship, Endowment of Skill sets and Natural resources in rural India, aims of rural entrepreneurship, barriers to entrepreneurship in rural India.

2. Skill Development: Process of entrepreneurship, rural applicability, skills required to succeed, Government training programmes and Public Private Partnership

3. Women Entrepreneurship: Primary goals for development, Women's role in economy, factors that support women's participation in rural entrepreneurship.

4. **ICT and Rural Entrepreneurship**: Rural ICT initiatives, Need to create rural ICT entrepreneurs, how IT is changing rural India, Rural BPO.

5. Case study; Corporate intervention and entrepreneurship Development.

Suggested Text Books:

Entrepreneurship Development – Theories and Practices – By N.P.Singh

Suggested Reference Book:

1.   Projects : Profile and process – Vasant Desai
2.   Entrepreneurship and echnology – Vasant Desai
3.   Economic Environment in Business – By Misra and Puri
4.   Women Entrepreneurs – By Deepak Walokar

Semester IV		SE – RABM – 06 Rural Marketing II
2 Credits	LTP: 1:1:1	Rural & Agri Business Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
RABM06.1	REMEMBERING	DESCRIBE the key terms associated with the Strategies of marketing.
RABM06.2	UNDERSTANDING	COMPARE and CONTRAST various approaches to pricing for a real world marketing offering in both rural and urban markets
RABM06.3	APPLYING	DEMONSTRATE an understanding of Framework of IMC
RABM06.4	ANALYSING	EXAMINE the various distribution Strategies of a real-world marketing offering
RABM06.5	EVALUATING	EXPLAIN the rising organized rural retailing, malls & Government initiatives
RABM06.6	CREATING	DESIGN the Promotion Strategy in rural marketing

1. Product Strategy: Product decisions, product classifications, product strategy levels, significance of product strategy, product strategies : assessment of acceptability, product design decisions, types of product strategies, product innovation strategies, customer value strategies, product identity strategies – branding, product identity strategies – packaging, brand building strategies, product lifecycle strategies, fighting fakes.

2. Pricing Strategy: Concept and significance, pricing objectives, pricing policy, pricing strategy – the affordability challenge, rural versus urban, needs integrated approach, pricing for the quality conscious segment, value conscious segment and price conscious segment , Pricing and environmental factors, pricing for competition, pricing by retailers, pricing and product lifecycle .

3. Distribution Strategy: Distribution – The Availability Challenge, Distribution Practices, Distribution Trends, Rural Logistics, Rural Coverage Decision, Geographical Information System for Planning Rural Coverage, Distribution decision – Direct Versus Indirect, Direct Marketing, Indirect Marketing.

4. **Rural Retailing:** The rise of organized retailing, types of retail outlets, role of retailers, rural malls, Government initiated retail outlets, entrepreneur founded malls, agri company retail outlets, retail outlets of petro-chemical companies, retailing by urban players, PPP models, E Tailing, Training Retailers.

5**. Promotion Strategy:** IMC – Concept and Management Awareness and Motivation Challenge, Objectives and Framework of IMC, Promotional Mix, Communication Process, Communication Media, Designing the Communication Strategy, IMC Strategy, Rural Advertising.

Suggested Text Books:

1. Rural Marketing – Text and Cases, Krishnamacharyulu and Ramakrishnan, Pearson
2. Rural Marketing – Concept and Practices, Dogra and Ghuman, TMGH

Suggested Reference Book:

1. Rural Marketing, Velayudhan, Sage
2. Rural Marketing, Gopalaswamy, Vikas Publishing house
3. Rural Marketing, Badi and Badi, Himalaya Publishing House

Syllabus for Pharma & Health Care Management (MINOR ONLY SPECIALIZATION)

Semester III		SC-PHCM- 01 Fundamental of Pharma and Healthcare Management
3 Credits	LTP: 2:1:1	Pharma and Healthcare Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM01.1	REMEMBERING	DESCRIBE concept of Pharma and healthcare management and FIND out the different role and responsibilities of managers.
PHCM01.2	UNDERSTANDING	UNDERSTAND the different managerial functions of managers
PHCM01.3	APPLYING	IDENTIFY right the motivation for right stakeholder in the healthcare sector for effective delivery of service.
PHCM01.4	ANALYSING	ANALYZE modern Pharma and Healthcare models
PHCM01.5	EVALUATING	EXPLAIN government initiatives to provide healthcare facilities in each part of country
PHCM01.6	CREATING	CONSTRUCT model to provide effective service in healthcare management

1. Introduction: Introduction of Pharmaceutical Industry, Health Care Management, Classical Management & Healthcare Services. Concept of Health Care Industry & its ever-changing character, Managerial activities for effective functioning, Duties and responsibilities of Managers, Qualities of effective Managers

2. Health Systems in India: Health planning in India including various committees and National Health Policy and Health Goals set from time to time. Organised sector with reference to Centre, State, District and Block level structures and local bodies and Panchayati Raj Organisation and functions of community health centres and Primary Health Centres (PHCs). Health Manpower, Primary Health care and concept, Alternative systems of medicine, like Ayurveda, Homeopathy, etc. Holistic Approach Non-Governmental Organisations (NGOs) and Private Voluntary Organisations (PVOs). Unorganized Sector.

3. Human Resource Management in Pharma and Healthcare Organization: Recruitment process, Training and development , Managerial Role: A Framework for Thinking as well as in Practices. Concept of Motivation, Significance of Motivating People in Health Care Delivery. Different Motivational Theories. Groups and Teams Organizational Learning, Innovation and Change,

4. Pharma and Healthcare marketing: Marketing Mix in Pharma and Healthcare, STP, CRM Concept, Role and Significance of Customer Relationship Management (CRM) in Pharma and Healthcare industry.

5. Modern Pharma and Healthcare models- Medical tourism, Tele Diagnosis and Tele medicine, Artificial Intelligence in Pharma and Healthcare, Use of Robotics in Pharma and Healthcare, Organised formats of Hospitals, Diagnostics and Chemist chain.

Suggested Text Books:
1. Organizing Design and Behavior in Health Care Services: Stephen M. Shortell, Arnold D. Kaluzny: CENGAGE Lernings
2. Healthcare Management Ruchi Singh Himalaya Publishing House.

Suggested Reference Books
1. Hospital Management by S. M. Jha
2. Organization Design and Behavior in Health Care Services: Cengage Learning Stephen M Shortell

Semester IV		SC-PHCM- 02 Pharma and Healthcare regulatory environment in India
3 Credits	LTP: 2:1:1	**Pharma and Healthcare Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM02.1	REMEMBERING	IDENTIFY various environmental factors affecting on Pharma and Healthcare industry
PHCM02.2	UNDERSTANDING	UNDERSTAND various laws applicable to Pharma and Healthcare industry
PHCM02.3	APPLYING	Understand the situation and identity right legal way to solve the problem.
PHCM02.4	ANALYSING	ANALYSE steps involved in Intellectual Property Rights registrations
PHCM02.5	EVALUATING	CHOOSE the right type of IPR as per the content and work available to protect.
PHCM02.6	CREATING	Elaborate the different laws developed by constitutions to support and protect Pharma and Healthcare sector

1. Environmental Scanning: Economic Environment**,** Competitive Environment, Political Legal Environment, Socio Cultural Environment, International and Technological Environment.

2. General Laws: General Law of Contract: Essentials of a Contract – Offer and acceptance – Capacity of Parties Free Consent – Consideration and legality of object – Void argument and

Contingent Contract, Law of privileged communications.

3. Introduction of Laws applicable to Hospitals: Functioning of hospitals and Medico – legal responsibilities cases and problems, Medico- Legal Problems in relation to health administration, Provision of commissioning of hospitals: Registration of companies act 2013 with reference to Incorporation of hospitals as a company, Indian medical council act 1956

4. Laws related to drugs and Pharmacy: Narcotic Drugs and Psychotropic Substances Act and Rules, Drugs and Cosmetics Act, 1940 , (Blood bank regulations under Drugs and cosmetic rules), Pharmacy Act 1948 Consumer Protection Act – Definition, Consumer Protection Council, Consumer Disputes Redressal Agencies – Other Salient features – Application of Consumer, Protection Act in Hospital, Recent judgment of Supreme Court, Implication for Health Professionals

5. Role of IPR in Pharma Business: Intellectual Property Rights: Ideas to Assets, Types of IPR , their term, crieteria and relevance: Patent, Trademarks, Design, Copyright, Trade secrets

Suggested Text Books:
1.New Drug Approval Process, edited by Richard A. Guarino
2.The Pharmaceutical Regulatory Process, edited by Ira R. Berry
3.Medical Product Regulatory Affairs, edited by J. J. Tobin and G. Walsh
4.Pharmaceutical Jurisprudence by G K Jani
5.Official websites related to various guidelines - www.ICH.Org 73 NIPER HYDERABAD
6.Compliance Quality Standards in the Pharmaceutical and Regulated Industries,
7.FDA Regulatory Affairs, edited by Douglas J. Pisano
8.The Pharmaceutical Regulatory Process edited by Ira R.Berry, Marcel Dekker.

Suggested Reference Books
1. The Pharmacy Act, 1948.
2. The Drugs and Cosmetics Act, 1940.
3. The Drugs and Magic Rem- edies (Objectionable Advertisement Act), 1954.
4. DPCO, 1995.
5. Patents Act, 2005/
6. Infant Milk substitutes, feeding bottles (Regulations of production, supply and distribution Act, 1992).
7. Clinical trial application requirement in India.
8. IND, NDA, ANDA application in Indian context.
 9. Prevention of Food Adulteration Act. 10. Narcotics Drugs and Psychotropic Substance, 1985. 11. Latest amendments to the Drugs & Cosmetics Act. Recommended books:

Semester III		SE-PHCM- 03 Strategic Planning & Healthcare Management
2 Credits	LTP: 1:1:1	Pharma and Healthcare Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM03.1	REMEMBERING	DEFINE strategy and DESCRIBE various types of Strategic planning
PHCM03.2	UNDERSTANDING	EXPLAIN why Vision Mission needs to consider for strategy formulation
PHCM03.3	APPLYING	USE strategic planning to solve the management problem in healthcare management
PHCM03.4	ANALYSING	ANALYSE various management problem where it is required to take strategic actions.
PHCM03.5	EVALUATING	COMPARE various strategic formulations and the select right strategy
PHCM03.6	CREATING	Understand the problem and DEVELOP strategy to solve it.

1. What is strategy: Strategy defined, Types of strategies, What strategy should achieve for an organization, The imperatives of strategy, Strategy Map

2. Strategy focus: Tie strategy to the mission and vision of the organization, environmental and competitor challenges, Vision – Mission and goals of the Healthcare organization.

3. Strategic formulation: Strategic formulation and implementation for Healthcare organizations, importance and effects of Blue ocean and Red ocean strategies in Healthcare.

4. Strategic Thinking: Methods and Models for Strategic Analyses, tools to evaluate the internal and external environment of Healthcare Industry.

5. Mapping and Managing a Strategy: a strategy "scorecard", Financing a Strategy, returns on strategic investments

Suggested Text Books:
1. Kim,W Chan, Mauborgne, Renée, Blue Ocean Strategy,
2. Strategic Management by Jeyarathnam Himalays Publication

Suggested Reference Books
Strategic Management and Business Policy by Dr. Azahar Kazmi.

Semester III		SE-PHCM- 04 Information Technology in Pharma and Healthcare
2 Credits	LTP: 1:1:1	Pharma and Healthcare Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM04.1	REMEMBERING	IDENTIFY the different types of information required in Pharma and Healthcare system
PHCM04.2	UNDERSTANDING	DESCRIBE the different types of Networks and structure require to establish computerize system in daily operations
PHCM04.3	APPLYING	Identify the different Integrated Health information Systems used by different Pharma and Healthcare companies
PHCM04.4	ANALYSING	SIMPLIFY the process to maintain an electronic record, its analysis, and Presentation for decision making
PHCM04.5	EVALUATING	DETERMINE the various components require to develop Hospital Information Systems (HIS)
PHCM04.6	CREATING	DEVELOP architecture for routine business activities in pharma and healthcare sector

1. Introduction to information: Scope, Components of hardware and software. Health Care Informatics: Introduction, Standardized languages in practice. Health IT Architecture: Information Technology architecture models in healthcare organizations, Service-oriented structures. Concept of biosignal processing and Medical Imaging.

2. IT Structure: Computer Networks- LAN, WAN, ISDN, VSAT. The Internet- structure, role in Medicine. Mobile IT devices in healthcare. Telemedicine and applications- Architecture of major telemedicine systems in India. Information compression, storage and transmission standards, wireless telemetry,

3. Regulations & Standards: Necessity of standards for electronic health, security issues, cyber laws, ethical and medico legal issues in patient information exchange. Healthcare Information Regulations & Standards: Legal Aspects of Managing Health information, Health records and Privacy, Health Level standards- HL7. Integrated Health information Systems.

4. Introduction to medical databases: Electronic Medical Record, Electronic Health Record. National and International regulations. Data collection, Data analysis, Data Presentation in Medical systems. Systems Implementation and Integration, Interface Engine. Patient registries/patient portals/Health information exchange.

5. Hospital Information Systems : Definition, Structure and Application, system Advantages. Nursing Informatics, Automated clinical laboratory systems. Pharmacy information system. Electronic Health- overview, implementation of various systems.

Suggested Books:
1. Management Information Systems by Kenneth C. Laudon
2. Information Systems for Modern Management by Robert G. Murdick
3. Fundamentals of Information Systems, Second Edition by Ralph M. Stair and George Walter Reynolds
4. Management Information system "Jayadevan".

Semester IV		SE-PHCM- 05 Pharmaceutical Import and Export
2 Credits	LTP: 1:1:1	Pharma and Healthcare Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM05.1	REMEMBERING	DEFINE the various concepts related to import and export procedure
PHCM05.2	UNDERSTANDING	DISCUSS various steps involved in export procedures of pharmaceutical product
PHCM05.3	APPLYING	IDENTIFY the international market for pharmaceutical product
PHCM05.4	ANALYSING	ANALYZE different payments methods used in international trade
PHCM05.5	EVALUATING	DETERMINE various rules and regulations related to export procedures of pharmaceutical product
PHCM05.6	CREATING	CHOOSE right product for the right International market.

1. Significance of procedures and documentation in international trade; procedures and documentation as trade barriers; WTO provisions; Aligned Documentation System (ADS); official machinery for trade procedures and documentation; ITC(HS) classification System ;Role of ICC; INCOTERMS; nature of export/trading houses.

2. Export order processing; export contract; export price quotations; shipping and custom clearance of export and import cargo; central excise clearance; main export and import documents; Role of forwarding agents; cargo insurance and claim procedure.

3. Methods of payment in international trade; documentary collection of export bills; UCPDC guidelines; realization of export proceeds – provisions of RBI's Exchange Control Manual; pre-shipment and post-shipment finance; role of EXIM bank and ECGC in India.

4. Major export promotion schemes in India – EPCGS, duty exemption scheme; DEPB scheme; SIL; facility for deemed exports; Export promoting institution's – role of export promotion councils, commodity boards and ITPO.

5. Regulations for International Trade: Major laws governing India's export import trade- Foreign Trade (Development & Regulation) Act, Pre-shipment Inspection & Quality Control Act, 1963 & Customs Act, 1962; Foreign Exchange Management Act, 2000

Suggested Text Books:
Export Import Procedures & Documentation by Dr. Kushpat S. Jain, HPH, 5th Revised Edition, Aug. 2007
Export Marketing by B. S. Rathor & J. S. Rathor, HPH, 3rd Revised & Enlarged Edition, 2006
Export Management by T. A. S. Balagopal, HPH, 18th Revised Edition, 2006
Export Management by D.C. Kapoor, Vikas Publishing House, 2009
Export- Policy, Procedures and Documentation by M. I. Mahajan, Show white, 24th Edition, 2010

Suggested Reference Books
Export Procedures and Documentation by M.D. Jitendra, Rajat Publications, Delhi.
Export Markets and Foreign Trade Management by Pervin Wadia, Kanishka Publications, New Delhi.

Semester IV		SE-PHCM- 06 Entrepreneurship in Pharma and Healthcare
2 Credits	LTP: 1:1:1	Pharma and Healthcare Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
PHCM06.1	REMEMBERING	DEFINE the key terms, LIST the Attributes and Characteristics of Entrepreneurs feature and ENUMERATE the Factors influencing Entrepreneurship Growth.
PHCM06.2	UNDERSTANDING	DISCUSS the various theories of entrepreneurship.
PHCM06.3	APPLYING	CONSTRUCT a framework for a typical EDP for the Pharma industry
PHCM06.4	ANALYSING	EXAMINE the role of Government and various support organizations in encouraging and supporting Entrepreneurship.
PHCM06.5	EVALUATING	COMPOSE an inventory of possible entrepreneurial opportunities in contemporary local, regional and national the context for Pharma and Healthcare sector.
PHCM06.6	CREATING	BUILD a business plan for an entrepreneurial pharma of healthcare venture.

1. Entrepreneurship: Entrepreneurship Need, scope and philosophy, Creativity and entrepreneurship, Entrepreneurial competencies and traits, Factors affecting entrepreneurial development: Religious, social, cultural, political, ancestral and demographic.

2. Theories of entrepreneurship: Innovation Theory by Schumpeter & Imitating, Theory of High Achievement by McClelland, X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen.

3. Entrepreneurship development: Entrepreneurial Competencies, Developing Competencies. Concept of entrepreneurship development, Entrepreneur Training and developing, Role of Entrepreneur Development Programs (EDP), Role of DIC, SISI , EDII , NIESBUD, NEDB, EDP - Objectives – contents – methods - execution. Role of Mentors. Innovation and Entrepreneurship, Design Thinking Process. Role of consultancy organizations in promoting Entrepreneurs, Problems and difficulties of Entrepreneurs

4. Role of Central Government and State Government in promoting Entrepreneurship: Introduction to various incentives, subsidies and grants, Export Oriented Units, Fiscal and Tax concessions available, Future of Entrepreneurship Development and Government, Start Up India, Make in India.

5. Enterprise Promotion: Creating Entrepreneurial Venture, Entrepreneurship Development Cycle, Business Planning Process, The business plan as an entrepreneurial tool, Elements of Business Plan, Ownership - Franchising, networking and alliances, Buying an existing business, Critical risk, Contingencies of the proposal, Scheduling and milestones.

Suggested Text Books:
1. Dynamics of Entrepreneurial Development and Management by Vasant Desai
2. Entrepreneurship Development Small Business Enterprises by Poornima Charanthimath
3. Small Scale Industries and Entrepreneurship by Vasant Desai
4. The Theory of Economic Development by Joseph A. Schumpeter.
5. Entrepreneurial Development by S S Khanka
6. Business Innovation by Praveen Gupta
7. Launching New Ventures by K. Allen
Suggested Reference Books
1. The Culture of Entrepreneurship, Brigitte Berger

Syllabus for Tourism & Hospitality Management (MINOR ONLY SPECIALIZATION)

emester III		SC-THM-01 Fundamentals of Hospitality Management
3 Credits	LTP: 2:1:1	**Tourism and Hospitality Management**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM01.1	REMEMBERING	DESCRIBE different types of hotels & travel agents
THM01.2	UNDERSTANDING	UNDERSTAND the basic functioning of star hotels, major operational, Departments, government rules & regulations
THM01.3	APPLYING	USE of flow charts & diagrams of various Hospitality Sectors to know the hierarchy of the organization
THM01.4	ANALYSING	EXAMINE current changes taking place in the Hotel & Tourism Industry
THM01.5	EVALUATING	EVALUATE the changes required to improve traditional methods to suit the current market trends.
THM01.6	CREATING	DEVELOP Smart techniques adaptable to the present market scenario for better customer satisfaction

1. Introduction: The Hospitality Industry, Origin and Growth, Tourism Industry, Importance of Tourism ,Industries related to Tourism, Evolution and Growth of the Hotel, Evolution of Tourism, Factors Affecting Hospitality and Tourism Industry, Employment Opportunities in Hospitality

2. Tourism Industry: Introduction, concept, definition, types and characteristics Relation of hospitality industry with Tourism Definition of Tourism, Features, Types of Tourists, Tourism Activities, Components of Tourism Infrastructure, Elements and Characteristics of Tourism Products, Scope of Tourism, Motivation for Tourism, Relation of hospitality industry with Tourism

3. Hotel Industry: Organization of Hotels, ownership structure: Sole Proprietorship, partnership, Franchisees, Management Contract, concept, their advantages and disadvantages. Clarification of Hotels, Major Departments of a Hotel, Star Ratings of Hotels, Global Standards for Hotels

4. Travel and Transport: History growth and present status of travel agency, Travel formalities, Linkages and arrangements with hotels, airlines and transport agencies, Transport system, Different types of transport, Impact of Science and Technology.

5. Recent Trends in Hospitality and related sectors: Future of Hospitality Industry, Changing trends, issue and challenges, Importance of Hospitality industry in India . Government regulations and support related to Travel, Tourism and hotel industries. Role of E- commerce in Hospitality sector

Suggested Text Books:
Bhatia A.K.(2012)Tourism Development and Principles & Practices, Sterling Publishers
Suggested Reference Books
  David, F. R. (2010). Strategic Management (13th ed.). Prentice Hall. Oxford University Press
  Okumus, F., Altinay, L., & Chathoth, P. (2010). Strategic Management for Hospitality and Tourism (1st ed.). Butterworth-Heinemann.
Enz, C. A. (2009). Hospitality Strategic Management: Concepts and Cases (2nd ed.). Wiley.

Semester IV		SC-THM-02 Tourism and Travel Management
3 Credits	LTP: 2:1:1	Tourism and Hospitality Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM02.1	REMEMBERING	DEFINE the various components of the Tourism Industry & Types of Tourism
THM02.2	UNDERSTANDING	UNDERSTAND basic operations of a Travel Agency & tour conduction
THM02.3	APPLYING	EXECUTE theoretical knowledge to design various tour packages & work on costing for the packages
THM02.4	ANALYSING	Analyze changing trends in Travel & Transport industry- Domestic & International
THM02.5	EVALUATING	INTERPRET the impacts of Tourism Industry globally & practicing of Eco-Tourism
THM02.6	CREATING	BUILD new concepts of Eco-Tourism according to customer requirements

1. Introduction: Tourism Definitions and Concepts, Components of tourism, Geographic components of tourism, Types of Tourists, Visitor, Traveler, and Excursionist, Differentiation Tourism, Recreation and leisure, adventure tourism, their inter–relationships, Tourism organization / Institutions, Role and functions of International agencies in Hospitality industry.

2. Travel Management: Travel Agency and Tour Operation Business, Functions of Travel Agency, Setting up a full-fledged Travel Agency - Sources of Income of a travel agency, Diversification of Business, Travel and Health Insurance, Forex, Cargo & MICE, Documentation, IATA Accreditation, Recognition from Government.

3. Tour Planning: Tour Packaging & Costing, Importance of Tour, Packaging, Classifications of Tour Packages, Components of Package Tours, Concept of costing, Types of costs, Components of tour cost, Preparation of cost sheet, Tour pricing, Calculation of tour price, Pricing strategies

4. Tourism Management: Tourism infrastructure, Tourism organizations, Travel motivators, Leisure or holiday Tourism, Visiting friends and Relatives (VFR), Cultural Tourism, Adventure Tourism, Sports Tourism, Religious Tourism, Business Tourism, Medical Tourism, Alternative Forms of tourism-Tourism Products and types.

5. Eco Tourism: Evolution, Principles, Trends and Functions of Ecotourism, Themes, Eco-tel and Eco resorts, Fundamentals of Ecology- Basic Laws & ideas in Ecology, Function and Management Ecosystem, Biodiversity and its Conservation, Pollution, Ecological Foot Prints, Mass Tourism Vs Ecotourism, Typology of Eco-tourists, Ecotourism Activities & Impacts, Western and Eastern Views of Ecotourism

Suggested Text Books:

Foster Dennis L., The Business Of Travel Agency Operations and Administration (1993)Macmillan/ McGraw, Singapore

Suggested Reference Books

Tourism Operations and Management, Sunetra Roday, Archana Biwal & Vandana Joshi

Semester III			SE-THM-03 Event Management
2 Credits	LTP: 2:1:1		Tourism and Hospitality Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM03.1	REMEMBERING	DESCRIBE the fundamentals of event management & different types of Events
THM03.2	UNDERSTANDING	EXPLAIN the concepts of Events & guest requirements to plan an event
THM03.3	APPLYING	DESIGN & Budget an event from various perspectives
THM03.4	ANALYSING	EXAMINE possible shortfalls on an event & create necessary back up systems to avoid failures
THM03.5	EVALUATING	COMPARE Success of an event in comparison to the set objectives
THM03.6	CREATING	COMPOSE New concepts of the event with innovative ideas to leave a lasting impression in the guest's mind along with achieving organizational growth.

1. Event Management Fundamentals Concept of Event, Types of events – MICE – Types of Meeting, Trade Shows, Conventions, Exhibitions- Structure of event industry – Event Management as a profession – Code of Ethics.

2. Event Planning and related statutory compliances: Event Conceptualizing – Host, Sponsor, Media, Guest, Crew, Participants, Spectators, Concept Designing – Theme, Event Objective and content development Pre Event Preparation: Budgeting, Event design, Event Related Documentations : Timing, Contracts and Agreements, Insurance, Regulation, License and Permits

3. Publicity & Marketing of Event : Pricing, Marketing Communication Methods & budget , Element Marketing Communication, Managing Marketing Communication, Modes of Publicity, Role of Internet in event publicity, Event Sponsorship, Managing Sponsorship, Measuring and evaluating sponsorship.

4. Conduct of Event: Venue selection: Indoor & Outdoor, Stage Audio Visual lighting, Performers, Decors, Caterer, Photography & Videography, Guest Demography and list, Handing children at event safety perspective, Invitation, media, food and beverage, entertainment, Event logistics management, Sanitary Facilities

5. Safety and Event Evaluation: Risk assessment, Provision of Safety Officer and Medical officer at venue, Structural Safety, Occupational Safety and Food Safety, Fire Prevention, Vehicle traffic, Waste Management, Event Evaluation Process: Event Impact, Service Quality, Customer Satisfaction

Note: Students are expected to be divided in Group and at least one event to be planned and executed by students.

Suggested Text Books:
Events, 4th Edition, Pearson Publications, 2014.
G.A.J. Bowdin, Events Management , Elseiver Butterworth
Suggested Reference Books
Allison ,The Event Marketing Handbook: Beyond Logistics & Planning.
Julia Rutherford Silvers, Professional Event Coordination, The Wiley Event Management Series.
Allison ,The Event Marketing Handbook: Beyond Logistics & Planning
John Beech, Sebastian Kaiser & Robert Kaspar, The Business of Events Management Pearson Publication, 2014.

Semester III		SE-THM-04 Tourism Planning and Development
2 Credits	LTP: 2:1:1	Tourism and Hospitality Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM04.1	REMEMBERING	DISCUSS Structures, Processes, Policies of Tours- Domestic & International Rules & regulations for operating a travel agency
THM04.2	UNDERSTANDING	UNDERSTAND Forex & Documentations for Operations
THM04.3	APPLYING	APPLY Knowledge to design attractive tours for clients
THM04.4	ANALYSING	ANALYZE Environmental impact & advantages of Eco-Tourism to promote sustainable tourism globally
THM04.5	EVALUATING	DETERMINE Environmental issues & adverse effects observed of Tourist destinations
THM04.6	CREATING	DESIGN backup systems to face crisis & emergencies Formulate Tourism policies for safe & secured travel of passengers

1. Tourism Components and Supply- Supply Components; Natural Resources; Built Environment; Operating Sectors; Hospitality and Cultural Resources; Matching Supply with Demand; Measuring and Forecasting Demand; Economic Impact

2. Tourism Policy - Structure, Content and Process- Tourism Policy – Definition; Policy focusing competitive Destination; Major Parameters of Tourism Destination Management; Process of Tourism Policy Formulation; Translating Policy into Reality; Formulating Policy to Deal with Crises

3. Environmental analysis: Environmental Analysis, Resource Analysis, Regional Environmental analysis

4. Tourism Planning, Development, And Social Considerations- Tourism Destination Planning, Planning for Sustainable Tourism Development, Contingency Planning, economic impact, social impact, cultural impact, environmental impact, and supply match, sustainable development and planning approaches and indicators, design and innovations.

5. Recent trends Tourism planning: Booking System, Tour scheduling, payment systems, feedback system

Suggested Text Books:
Var, T., & Gunn, C. (2002). Tourism Planning: Basics, Concepts, Cases (4th ed.). Routledge
Suggested Reference Books
Godfrey, K., & Clarke, J. (2000). Tourism Development Handbook: A Practical
Approach to Planning And Marketing. Cengage Learning EMEA.Okumus, F., Altinay, L., & Chathoth, P. (2010). Strategic Management for Hospitality and Tourism (1st ed.). Heinemann

Semester IV		SE-THM-05 Strategic Hospitality Management
2 Credits	LTP: 2:1:1	Tourism and Hospitality Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM05.1	REMEMBERING	DEFINE Concept & process of Strategic thinking Major Players of Hospitality & Travel Industry
THM05.2	UNDERSTANDING	DISCUSS Strategic management for various organizations factors influencing strategy formulations
THM05.3	APPLYING	IMPLEMENT strategies for Hotels & Travel Agents with the help of structured designs & flow charts
THM05.4	ANALYSING	ANALYSE Suitable strategies for different Hospitality sectors with consideration to micro & macro environments
THM05.5	EVALUATING	EVALUATE Current market scenario & suggest strategies that can be utilized for the benefits of the company
THM05.6	CREATING	DEVELOP Strategies for standalone units, a chain of hotels, small and large travel agents International strategies for small & big players

1. Introduction To Strategic Hospitality Management- Strategic Management–Origin, concept, Scope and Process; Strategic Thinking; Global competitiveness; Key Players in Indian Hospitality and Tourism Industry.

2. Micro And Macro Strategic Environment- The Environment and External Stakeholders - Assessment of the Broad Environment, Analysis of External Stakeholders and the Operating Environment, Managing the Operating Environment; Organizational Resources and Competitive Advantage - Internal Analysis and Competitive Advantage.

3. Strategic Direction & Formulating Basic Strategies- Strategic Direction-Creating a Strategic Direction, Mission Statements, Organizational Vision, Organizational Values; Strategy Formulation at the Business-Unit Level-Generic Business Strategies, Competitive Dynamics, Strategic Group Mapping; Corporate-Level Strategy and Restructuring.

4. Implementing Strategies And Establish Control Systems- Inter organizational Relationships and the Tourism Cluster; Functional-Level Resource Management; Organizational Design and Control- Organizational Structures design, Organizational Control, power and politics.

5. Strategies For Hospitality Entrepreneurship- Strategies for Entrepreneurship and Innovation -Entrepreneurial Start-ups, Innovation and Corporate Entrepreneurship; Global Strategic Management and the Future- Global Strategies, International Market Selection, Global Stakeholders, Emerging Trends.

Suggested Text Books:
Enz, C. A. (2009). Hospitality Strategic Management: Concepts and Cases
Suggested Reference Books
David, F. R. (2010). Strategic Management (13th ed.). Prentice Hall.
Okumus, F., Altinay, L., & Chathoth, P. (2010). Strategic Management for Hospitality and Tourism (1st ed.). Butterworth-Heinemann.

Semester III		SE-THM-06 Revenue Management for Hospitality
2 Credits	LTP: 2:1:1	Tourism and Hospitality Management

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
THM06.1	REMEMBERING	DESCRIBE Basic concepts & terminologies related to finance & revenue
THM06.2	UNDERSTANDING	EXPLAIN Flow of cash, capital, investment, loan & generation of revenue from various sectors of Hospitality Franchising, leasing & renting out properties
THM06.3	APPLYING	DETERMINE the utilization of available funds for business maximization
THM06.4	ANALYSING	To ANALYSE Financial status of the organisation
THM06.5	EVALUATING	MEASURE the relation between income & outflow of revenue, profit & loss of organization Budgeting of required necessities Forecasting business & making necessary investments
THM06.6	CREATING	DEVELOP Business plan for future prospectus of organization Business proposals & expansions

1. Introduction : A Basic Understanding of Financial Management – Profit vs Wealth Maximization- Time value of money - Financial Markets- Capital Markets, Money Market - Financial Instruments-- Key Financial Intermediaries in the Hospitality Industry.

2. Relationship between Risk and Rewards : Risk. Returns and Distributions – Diversification - Beta. Expected Return and the Security Market Line- Bonds - Bond Features-. Bond Ratings-. Valuing Corporate Bonds. Computing Yield to Maturity on Corporate Bonds. Bonds with Semi-Annual Coupon Payments. Preferred Stock- Basic Preferred Stock Terminology. Preferred Stock Features. Valuing Preferred Stock - Common Stock-Common Stock Features. Valuing Common Stock. General Dividend Valuation Model - Zero-Growth Dividend Valuation Model. Constant-Growth Dividend Valuation Model. Valuing Common - Stock with Multiple Growth Rates. - Investors Rate of Return and Growth**.**

3. Cost of Capital and Capital Structure : The Weighted Average Cost of Capital - The Cost of Debt- The Cost of Preferred Stock - Cost of Internal Equity - Cost of. External Common

4. Equity - New Issues of Common Stock Financial Planning for the Hospitality- Capital Structure Theory - Factors in the Determination of a Firms Capital Structure.

5. Capital Budgeting and Working Capital Management: Classifying Capital Budgeting Projects- The Capital Budgeting Decision and Cash Flow Estimation - Uses -Managing Working Capital Other Financial Issues: Leasing, Expansion, Franchising - Asset Management in the Hospitality Industry- Valuation of Hospitality Real Estate - Hotel Appraisal Requirements - The Hotel Appraisal Process -Approaches to Hotel Valuation -Thumb rules-Revenue Multipliers.- Reconciliation

Suggested Text Books:
I.M.Pandey, Financial Management, Vikas.
M.Y. Khan & Jain, Financial Management, McGraw-Hill.

Suggested Reference Books
Robert E. Chatfield, Michael C. Dalbor, Hospitality Financial Managment: Prentice Hall US.
William P. Andrew, James W. Damitio, Ph.D, CMA,Raymond S. Schmidgall

Syllabus for International Business Management (MINOR ONLY SPECIALIZATION)

Semester: III	Course Code: SC-IB-01	304 IB: Import Export Documentation and Procedures
3 Credits	LTP: 2:1:1	Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304IB.1	REMEMBERING	DESCRIBE THE PROCESS OF IMPORT AND EXPORT IN THE CONTEXT OF BUSINESS
CO304IB.2	UNDERSTANDING	EXPLAIN THE IMPORT AND EXPORT TRANSACTIONS, CLASSIFICATION AND VARIOUS PAYMENT TERMS
CO304IB.3	APPLYING	IDENTIFY VARIOUS TYPES OF DOCUMENTS REQUIRED FOR THE PROCEDURES INVOLVED IN IMPORT AND EXPORT
CO304IB.4	ANALYSING	EXAMINE VARIOUS DOCUMENTATION FORMATS FOR THE IMPORT AND EXPORT PROCESSES
CO304IB.5	EVALUATING	EXPLAIN PRE AND POST ACTIVITIES OF IMPORT AND EXPORT PROCESS
CO304IB.6	CREATING	DISCUSS ON VARIOUS ASPECTS OF TRADES, DOCUMENTATION AND PROCEDURES FOR IMPORT AND EXPORT

1. **Introduction to Imports and Exports:** Meaning and Definition of Imports and Export – Classification – Strategy and Preparation for Export Marketing – Export Marketing Organizations – Registration Formalities – IEC – RCMC – Export Licensing – Selection of Export Product – Identification of Markets – Methods of Exporting – Pricing Quotations – Payment Terms – Letter of Credit - Liberalization of Imports – Negative List for Imports – Categories of Importers – Special Schemes for Importers. **(7+2)**

2. **Management of Import and Exports:** Basic Concept of Import and Exports - Understanding an Export Transaction - Direct Quotation Method - Spot & Forward rates and booking of Forward contract for exports – Understanding NOSTRO, VOSTRO and LORO - Payment terms - contents and types of Letter of credit - Uniform Customs Procedures for Documentary Credits (UCPDC) - Excise clearance - Customs house agents - Marine insurance. **(7+2)**

3. **Import Export Documentation:** Aligned Documentation System – Commercial Invoice – Shipping Bill – Certificate of Origin – Consular Invoice – Mate's Receipt – Bill of Lading – GR Form – ISO 9000 – Procedure for obtaining ISO 9000 – BIS 14000 Certification – Types of Marine Insurance Policies - Import Documents – Transport Documents – Bill to Entry – Certificate of Inspection – Certificate of Measurements – Freight Declaration - Principal, Auxiliary & Regulatory set of documents. **(7+2)**

4. **Import Export Procedures:** Steps in Export Procedure – Export Contract – Forward Cover – Export Finance – Institutional framework for Export Finance – Excise Clearance – Pre-shipment Inspection – Methods of Pre-shipment Inspection – Marine Insurance – Role of Clearing and Forwarding Agents – Shipping and Customs Formalities – Customs EDI System – Negotiation of Documents – Realisation of Exports Proceeds - Pre-Import Procedure – Steps in Import Procedure – Legal Dimensions of Import Procedure – Customs Formalities for Imports – Warehousing of Imported goods – Exchange Control Provisions for Imports – Retirement of Export Documents. **(7+2)**

5. **Policy Framework for Imports and Exports:** Foreign Trade Policy – Highlights – Special Focus Initiatives – Duty Drawback – Deemed Exports – ASIDE – MAI & MDA – Star Export Houses – Town of Export Excellence – EPCG Scheme – Incentives for Exporters. Export Promotion Councils-Commodity Boards – FIEO – IIFT – EOUs – SEZs – ITPO – ECGC – EXIM Bank. **(7+2)**

Note:
- Real world examples and cases are expected to be discussed and analysed in the class as well as included in the examination.

Suggested Text Books:
- Export-Import Procedures and Documentation, Jain Khushpat S, Himalaya Publishing House

- Export Import Procedures Documentation & Logistics, Abir Lal Mukherjee, Random Publications

Suggested Reference Books:
- Export Import Procedures and Documentation, Thomas Johnson, Donna Bade, Harper Collins Publisher.
- Export-Import Theory, Practices, and Procedures, Erdener Kaynak, Belay Seyoum, Routledge.
- Export Import Management,   Justin Paul, Rajiv Aserkar, OUP India.
- Exporting: Regulations Documentation Procedures: International Documentation and Procedures, George P. Thompson, George W. Thompson, Catherine J. Peterson, Global Training Center

Semester: IV	Course Code: SC-IB-02	404 IB: Global Trade and Logistics Management
3 Credits	LTP: 2:1:1	Generic Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404IB.1	REMEMBERING	DESCRIBE THE ECONOMIC SIGNIFICANCE OF TRADE ALONG WITH THE LOGISTICS PROCESSES
CO404IB.2	UNDERSTANDING	EXPLAIN INTERNATIONAL TRADE THEORIES AND APPLICATIONS IN BUSINESS
CO404IB.3	APPLYING	IDENTIFY VARIOUS ENVIRONMENTAL FACTORS ASSOCIATED WITH INTERNATIONAL BUSINESS
CO404IB.4	ANALYSING	EXAMINE VARIOUS MODES AND PRACTICES OF INTERNATIONAL LOGISTICS
CO404IB.5	EVALUATING	EXPLAIN THE ACTIVITIES INVLOLVED IN ENTIRE LOGISTICS PROCESSS IN INTERNATIONAL BUSINESS
CO404IB.6	CREATING	DEVELOP THE APPROPRIATE STTRATEGY OF OPERATIONS FOR GLOBAL TRADE AND LOGISTICS

1. **Introduction to Global Trade and Logistics Management:** Introduction to International Business - Elements of International Business – Globalization and trade - Trade and its significance - Economic significance of trade - Elements of Logistics Management – Trade and Logistics Processes. **(7+2)**
2. **International Trade Theories and Applications:** Why do nations trade - Theories of International trade – Mercantilism - Absolute advantage - Comparative advantage - Heckscher-Ohlin, Product life cycle theory and Porter's diamond model. **(7+2)**
3. **International Business Environment:** Economic Environment - Political Environment - Demographic environment - Legal Environment - Global sourcing - Challenges for Indian Businesses – Introduction to Foreign Trade Policy – Institutional Framework for Export Promotion – Export Incentives and Facilities. **(7+2)**
4. **Introduction to Global Logistics:** Introduction to global logistics - Different modes of shipment - Different modes of operation of shipping - Different modes of transport - Multi modal transport system - Chartering practice - Conference system - Containerization – Concepts of FCL/LCL, CFS, ICD - Third party logistics. **(7+2)**
5. **Global Logistics Operations:** Concepts of CHA,FFA,C&FA - Ship operating agents an process – Understanding NVOCC - Introduction to port operations - harbor facility and terminal facility - Role of VTMS - Customs bonded warehouses - Freight types, application, and consolidation - Introduction to International logistics - logistics Documentation - Understanding INCOTERM and Selection of INCOTERM - Application of information technology in global logistics. **(7+2)**

Note:
- Real world examples and cases are expected to be discussed and analyzed in the class as well as included in the examination.

Suggested Text Books:
- Logistics Management for International Business: Text and Cases, S. Sudalaimuthu, S. Anthony Raj, PHI Learning.
- Logistics Management and World Seaborne Trade, Muthiah Krishnaveni, Himalaya Publishing House
- International Trade Logistics, Ram Singh, Oxford University Press

Suggested Reference Books:

- Global Supply Chain Management and International Logistics, Alan E. Branch, Routledge.
- International Logistics: The Management of International Trade Operations, Pierre A. David, Richard D. Stewart, Cengage Learning.
- Global Logistics: New Directions in Supply Chain Management, Donald Waters, Kogan Page.
- Global Logistics and Supply Chain Management, by John Mangan, Chandra L. Lalwani, John Wiley & Sons.
- Handbook of Global Logistics: Transportation in International Supply Chains, James H. Bookbinder, Springer.
- Mastering the Business of Global Trade: Negotiating Competitive Advantage, Thomas A. Cook, CRC Press

Semester: III	Course Code: SE-IB-01	312 IB: Cross Cultural Management and Global Leadership
2 Credits	LTP: 1:1:1	Elective Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO312IB.1	REMEMBERING	DESCRIBE THE CONCEPT OF CULTURE AND SIGNIFICANCE OF CROSS-CULTURAL MANAGEMENT
CO312IB.2	UNDERSTANDING	OUTLINE THE CULTURAL VALUES AND DIFFERENCES WITH DIMENSIONS OF CULTURAL NORMS AND BEHAVIORS
CO312IB.3	APPLYING	IDENTIFY VARIOUS FACTORS AFFECTING CULTURE AND DECISION-MAKING MODELS ACROSS CULTURES
CO312IB.4	ANALYSING	EXAMINE THEORIES OF LEADERSHIP WITH LEADERSHIP ACROSS CULTURES
CO312IB.5	EVALUATING	EXPLAIN CULTURALLY INTELLIGENT LEADERSHIP IN INTERNATIONAL TRADE
CO312IB.6	CREATING	DISCUSS ON LEADING AND MANAGING MULTICULTURAL TEAMS IN INTERNATIONAL CONTEXT

1. **Introduction to Cross-Cultural Management:** Concepts of culture - globalization of business - organizational culture - Cultural dimensions - cross-cultural management - Management in cultural context - Cross-cultural teams - Diversity Management - Understanding Cultural Values and Differences - cultural norms and behaviors - Cultural Acumen for the Global Manager. **(5+1)**
2. **Management in Diverse Cultures:** Dimensions of Culture - Communicating across Cultures - Negotiating across Cultures - Multicultural Teams - Cross-cultural Marketing - Culture and Human Resource Management - Motivation across cultures - Expatriate Management - Global Teams - cultural intelligence - cross-border business agreements. **(5+1)**

3. **Business Dimensions of Culture:** National and global cultures - Decision-making models across cultures - Cultural characteristics - Cross-cultural communication - Negotiating styles in different cultures – Diversity management - Global Citizenship. **(5+1)**
4. **Introduction to Global Leadership:** Concept of Global Leadership - Theories of Leadership - Leadership Attributes - Global Leadership Forces - Leadership across cultures: styles, expectations and management - Culturally intelligent leadership in a globalized business world - Leadership Power and Influence - Leadership Behavior& Culture, Ethics and Norms - Leadership, Transitions & Relocation - Leading Trade Internationally. **(5+1)**
5. **Global Team Management:** Working in multi-cultural teams: Managing Differences - Managing Multicultural Teams - concepts, processes and performance - Culturally intelligent team management: skills and strategies - Creating cultural competence - ethical dilemmas of international executives - Groups, Teams, and Their Leadership and Change. **(5+1)**

Note:
- The focus of the entire course should be on international business context
- Real world examples and cases are expected to be discussed and analyzed in the class.

Suggested Text Books:
- Cross - Cultural Management: Text and Cases, Dipak Kumar Bhattacharyya, Prentice Hall India Learning

- Effective Leadership in Organisational Success Process, Ravi K. Wadhawan, International Book House

Suggested Reference Books:
- Cross Cultural Management: Concepts and Cases, Madhavan, Oxford University Press.
- Understanding Cross-Cultural Management, Marie-Joelle Browaeys, Roger Price, Pearson
- Cross-Cultural Management: A Transactional Approach, Taran Patel, Routledge.
- Global Leadership: A Transnational Perspective, Gama Perruci, Routledge.
- Managing Cultural Differences: Global Leadership for the 21st Century, Neil Remington Abramson, Robert T. Moran, Routledge

Semester: III	Course Code: SE-IB-02	313 IB: International Business and Employment Laws
2 Credits	LTP: 1:1:1	Elective Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO313IB.1	REMEMBERING	DESCRIBE THE INTERNATIONAL BUSINESS CONTRACT IN THE LEGAL FRAMEWORK OF INTERNATIONAL BUSINESS
CO313IB.2	UNDERSTANDING	EXPLAIN INTERNATIONAL BUSINESS LAWS PERTAINING TO COMPETITION, COMPLIANCES, ARBITRATION, **AND CUSTOMS**
CO313IB.3	APPLYING	IDENTIFY VARIOUS ASPECTS OF INTERNATIONAL TRADE LAWS FOR BUSINESS
CO313IB.4	ANALYSING	EXAMINE INTERNATIONAL LEGAL TRADE TERMS FOR THE APPLICABILITY AND SIGNIFICANCE IN INTERNATIONAL BUSINESS
CO313IB.5	EVALUATING	EXPLAIN LEGAL ASPECTS INVOLVED IN THE IMPORT EXPORT AND INTERNATIONAL BUSINESS
CO313IB.6	CREATING	DISCUSS ON VARIOUS ASPECTS OF INTERNATIONAL EMPLOEEMENT LAWS AND ISSUES

1. **Legal Framework of International Business:** Legal Framework of International Business - Nature and complexities; Code and common laws and their implications to business; International business contract – legal provisions; Payments terms; International sales agreements; Rights and duties of agents and distributors - Governance of the sea and air - Regulations in international business - Advertising laws throughout the world - Social, political and environmental regulations in world - Legal aspects of doing business in multinational markets. **(5+1)**

2. **International Business Competition Laws:** International and Comparative Competition Law - Merger & Acquisitions and Competition Law - Corporate Finance, Investment Laws and Compliances. **(5+1)**

3. **International Business Commercial Laws:** Commercial Contracts - International Commercial Arbitration and the Law - Intellectual Property Law Information Technology Law - **Import-Export and Customs Laws. (5+1)**

4. **International Trade Law:** Common Terms of Sale from Common law - International Legal Trade Terms of Cost, Insurance, freight, Free on Board and Letter of credit - Overview of United Nations Convention on Contracts for the International Sale of Goods. **(5+1)**

5. **Legal Framework of International Employment:** International labour law - Employment contracts - Terms and clauses of employment - Social security legislation of employment - New Minimum Wage Requirements - Restrictions on Incentive Compensation - Global Integration of Employment Practices - Third-Party Compliance Liability - Issues in International Employment. **(5+1)**

Note:
- The focus of the entire course should be on international business context
- Real world examples and cases are expected to be discussed and analyzed in the class.

Suggested Text Books:
- International Business: Text and Cases Paperback, Cherunilam, Prentice Hall India Learning.
- Private International Law: Indian and English, Paras Diwan, Deep & Deep.
- International Trade Law, S.R. Myneni, Allahabad Law Agency

Suggested Reference Books:
- Statutory Regulation and Employment Relations: The Impact of Statutory Trade Union Recognition, Sian Moore, Sonia McKay, Sarah Veale, Palgrave Macmillan
- East Asian Labor and Employment Law: International and Comparative Context, Ronald Brown, Cambridge University Press
- International Human Resource Management, Christopher Brewster , Guy Vernon , Paul Sparrow , Elizabeth Houldsworth, Kogan Page
- International Trade and Business: Law, Policy and Ethics, Gabriel Moens, Peter Gillies, Routledge
- International Trade: Theory and Policy, Paul Krugman, Maurice Obstfeld, Marc Melitz, Pearson

Semester: IV	Course Code: SE-IB-03	409 IB: Global Competitiveness, Value Chains and Alliances
2 Credits	LTP: 1:1:1	Elective Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO409IB.1	REMEMBERING	DESCRIBE THE CONCEPT OF GLOBALISATION AND GLOBAL COMPETITIVENESS IN INTERNATIONAL BUSINESS
CO409IB.2	UNDERSTANDING	EXPLAIN THE EFFICACY OF THE FOREIGN COLLABORATIONS AND JOINT VENTURES IN INTERNATIONAL BUSINESS
CO409IB.3	APPLYING	IDENTIFY VARIOUS ELEMENTS OF VALUE CHAIN INVOLVED IN IMPORT AND EXPORT BUSINESS
CO409IB.4	ANALYSING	EXAMINE VARIOUS FACTORS OF INTERNATIONAL SUPPLY CHAIN DESIGN AND GLOBAL PROCUREMENT AND DISTRIBUTION
CO409IB.5	EVALUATING	EVALUATE THE GLOBAL COMPETITIVENESS INDEX FOR INTERNATIONAL BUSINESS
CO409IB.6	CREATING	DISCUSS ON ROLE AND SIGNIFICANCE OF STRATEGIC ALLIANCES IN INTERNATIONAL BUSINESS CONTEXT

1. **Introduction to Global Competitiveness:** What is global competitiveness **-** Semiglobalization Today and Tomorrow - Global Concentration and Externalities - Global Risks and Global Imbalances - Global Exploitation, Global Oppression and Global Homogenization - Global Competitiveness Index - Factors Affecting Global Competitiveness - The Emerging Arena and Business in World. **(5+1)**

2. **Foreign Collaborations and Joint Ventures:** Foreign Direct Investment Policy, Industrial Policy – Kinds of Collaboration and Joint Ventures – Drafting of Agreement – Restrictive Clauses in the Foreign Collaboration and Joint Venture Agreements – International Commercial Arbitration. **(5+1)**

3. **Value Chains:** Business Performance and Value Chain - Assessment of Value Chain Activities - Capacity and Facilities Resources Planning and Scheduling - Supply Chain Design - Global Procurement and Distribution - Forecasting and Inventory Management - Global Project Management - Technology in managing the Supply Chains. **(5+1)**

4. **Strategic Alliances:** Meaning, Rationale, Types, Trends in Alliances in New Competitive Environment - Strategic Alliance Failures - Managing Strategic Alliances – Role of significance of strategic alliances in international context. **(5+1)**

5. **Business Framework for International Business:** Role of MNEs in host economy – Trends in Global FDI - Instruments of Trade Policy - Trading Blocks (ASEAN, SAFTA, SAARC, NAFTA, EU) – Role of WTO and UNCTAD – Significance of IMF, IBRD, ADB - Doha Development Round - Regulatory Framework for Subsidies & Countervailing duties in India. **(5+1)**

Note:
- The focus of the entire course should be on international business context
- Real world examples and cases are expected to be discussed and analyzed in the class.

Suggested Text Books:
- International Business: Environment and Globalization, Mahua Dutta, Dreamtech Press.
- International Business & Trade, Ashish Gupta, Mani Kansal, Vayu Education

Suggested Reference Books:
- Enhancing Global Competitiveness through Sustainable Environmental Stewardship, Subhash C. Jain, Ben L. Kedia, Edward Elgar Publishing.
- Global Business: Competitiveness and Sustainability, Riad A. Ajami, G. Jason Goddard, Routledge.
- Competition Policy and Global Competitiveness in Major Asian Economies, Tran Van Hoa, Edward Elgar Publishing.
- Business, Power and Sustainability in a World of Global Value Chains, Stefano Ponte, Zed Books.
- Global Value Chains and Development: Redefining the Contours of 21st Century Capitalism, Gary Gereffi, Cambridge University Press.

Semester: IV	Course Code: SE-IB-04	410 IB: International Banking and Foreign Exchange Management
2 Credits	LTP: 1:1:1	Elective Core Course

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE ABILITIES	COURSE OUTCOMES
CO410IB.1	REMEMBERING	DESCRIBE THE CHARACTERISTICS AND SIGNIFICANCE OF INTERNATIONAL BANKING
CO410IB.2	UNDERSTANDING	EXPLAIN THE RELEVANCE OF MONEY MARKET AND MONITORY POLICY IN INTERNATIONAL BANKING
CO410IB.3	APPLYING	IDENTIFY VARIOUS TYPES OF FOREIGN EXCHANGE MARKETS AND TRANSACTIONS
CO410IB.4	ANALYSING	EXAMINE SUPPLY AND DEMAND VIEW OF EXCHANGE RATES IN INTERNATIONAL BUSINESS
CO410IB.5	EVALUATING	EXPLAIN THE EXCHANGE RATE RISK AND EXPOSURE IN INTERNATIONAL MARKETS
CO410IB.6	CREATING	DISCUSS ON LINKAGES OF INTERNATIONAL BANKING AND FOREIGN EXCHANGE WITH INTERNATIONAL BUSINESS

1. **Introduction to International Banking:** What is International Banking - Concept of Money Market, Developed and less developed Money Market, Their Characteristics & Importance - English Banking System – Bank of England, Origin and Growth, Organizational Structure, Functions, Monitory Policy, Commercial Banking System. **(5+1)**

2. **International Banking Institutions:** Federal Reserve System - Origin, Organizational Structure and Working, Commercial Banking in USA, Unit Banking and Branch Banking and Factors for its Growth in USA - New York Money Market – Constituents and Working, London Money Market - Market Constituents working - Credit Instruments of Euro and Dollar - European European Central Bank, Organization Structure and Functions - Bank of Japan- Structure and Working, Asian Development Bank- Functions, Structure and Working - Reserve Bank of India- Functions, Monetary and Credit Policy and Evaluation, - Indian Money Market - Banking Reforms in India – Role of NABARD - International Financial Institutions- I.M.F. and I.B.R.D, I.D.A, IFC, BRICS - New Development Bank. **(5+1)**

3. **Foreign Exchange Markets:** Foreign Exchange Markets and Transactions - Quoting Foreign Exchange Rates, Spread, Official and Free market rates - Direct , Indirect and Cross Rates - Forward Rates with Quoting and Structure - Forward Exchange Rates versus Expected Future Spot Rate - Outright Forwards versus Swaps . Currency Futures, Marking to Market - Futures Contract Versus Forward Contract - The link between the Future and the Forward Contract. **(5+1)**

4. **Exchange Rates Assessments:** The Balance of Payment Accounts - The net International Investment Position - Supply and Demand View of Exchange Rates - Modern Theories of Exchange Rates - Alternative Systems of Exchange Rate - Hybrid System and Target Zone Arrangement. **(5+1)**

5. **Foreign Exchange Risks and Taxation:** The nature of Exchange Rate Risk and Exposure - Types of Foreign Exchange Exposure - Alternative Strategies for Exposure Management - Exposure Management Techniques - Hedging Risk and Exposure - Different Forms of Taxes, Import Duties - Withholding Taxes AND Branch vs Subsidiary Taxes - Organizational structures for reducing taxes - Tax Reliefs - Tax Treatment of Foreign Exchange Gains and Losses. **(5+1)**

Note:
- The focus of the entire course should be on international business context
- Real world examples and cases are expected to be discussed and analyzed in the class.

Suggested Text Books:
- International Trade Finance, Indian Institute of Banking & Finance, Taxmann Publications.
- Money Banking International Trade & Public Finance, M.L. Seth, Lakshmi Narian Agarwal.
- Foreign Exchange and Risk Management Paperback, C. Jeevanandam, Sultan Chand & Sons.
- Foreign Exchange Management, Sunil Kumar, Galgotia Publishing Company

Suggested Reference Books:
- Environmental Systems and Societies, Jill Rutherford, Oxford University Press.
- International Banking, Legal and Regulatory Aspects, Indian Institute of Banking & Finance, Macmillan Publishers.
- Foreign Exchange International Finance Risk Management, A. V. Rajwade, H. G. Desai, Arizona Business Alliance.
- International Trade Finance, Indian Institute of Banking & Finance, Taxmann Publications.
- How Global Currencies Work – Past, Present, and Future, Barry Eichengreen, Arnaud Mehl, Livia Chitu, Princeton University Press.

Savitribai Phule Pune University, Pune

Faculty of Commerce and Management

Master of Computer Applications (MCA)

Programme Curriculum (Sem. I & II)
(2020-2022)

Preamble:

1. The name of the programme shall be Masters of Computer Applications (M.C.A)
2. The revised MCA Curriculum 2020 builds on the implementation of the Choice Based Credit System (CBCS) and Grading System initiated in the AY 2015. The curriculum takes the MCA programme to the next level in terms of implementing Outcome Based Education along with the Choice Based Credit System (CBCS) and Grading System.
3. The Institutes should organize placement programme for M.C.A. students by interacting with Industries and software consultancy.
4. At the end of each semester, appearing for various certifications is possible for each student enabling them to make their resume rich.
5. With the rapidly changing scenario industry and academia should identify possible areas of collaboration and work together. Institute's placement cell should focus on identifying industrial expectations and institutional preparation for meeting industrial needs.

Introduction:

1. **Definition: Outcome Based Education:**

1.1 **Outcome Based Education (OBE) Approach:** Outcomes are about performance, and this implies:

 1.1.1 There must be a performer – the student (learner), not only the teacher
 1.1.2 There must be something performable (thus demonstrable or assessable) to perform
 1.1.3 The focus is on the performance, not the activity or task to be performed

1.2 **Programme Educational Objectives (PEOs):** Programme educational objectives are broad statements that describe the career and professional accomplishments that the programme is preparing graduates to achieve. Programme Educational Objectives are a set of broad future focused learner's performance outcomes that explicitly identify what learners will be able to do with what they have learned, and what they will be like after they leave institution and are living full and productive lives. Thus, PEOs are what the programme is preparing graduates for in their career and professional life (to attain within a few years after graduation).

1.3 Programme Outcomes (POs): Programme Outcomes are a set of narrow statements that describes what students (learners) of the programme are expected to know and be able to perform or attain by the time of graduation.

1.4 Course Outcomes (COs): Course Outcomes are narrower statements that describe what students are expected to know and be able to do at the end of each course. These relate to the skills, knowledge, and behavior that students acquire in their matriculation through the course.

1.5 Learning Outcomes: A learning outcome is what a student CAN DO because of a learning experience. It describes a specific task that he/she can perform at a given level of competence under a certain situation. The three broad types of learning outcomes are: a) Disciplinary knowledge and skills b) Generic skills c) Attitudes and values

1.6 Teaching and Learning Activities (TLAs): The set of pedagogical tools and techniques or the teaching and learning activities that aim to help students to attain the intended learning outcomes and engage them in these learning activities through the teaching process.

1.7 Assessment and Evaluation: Assessment is one or more processes, carried out by the institution, that identify, collect, and prepare data to evaluate the achievement of programme educational objectives and programme outcomes. Evaluation is one or more processes, done by the evaluation team, for interpreting the data and evidence accumulated through assessment practices. Evaluation

1.8 determines the extent to which programme educational objectives or programme outcomes are being achieved, and results in decisions and actions to improve the programme.

2. MCA Programme Focus:

The basic objective of the Master of Computer Applications (MCA) is to provide a steady stream of necessary knowledge, skills and foundation for acquiring a wide range of rewarding careers into rapidly expanding world of Information Technology

2.1 Programme Educational Objectives: PEOs are defined by institution. Following are the guidelines for defining PEOs

2.1.1 PEOs should be assessable and realistic within the context of the committed resources.
2.1.2 The PEOs should be consistent with the mission of the institution.
2.1.3 All the stakeholders should participate in the process of framing PEOs.
2.1.4 The number of PEOs should be manageable.
2.1.5 It should be based on the needs of the stakeholders.
2.1.6 It should be achievable by the programme.
2.1.7 It should be specific to the programme and not too broad.
2.1.8 It should not be too narrow and similar to the POs.

2.2 MCA Programme Outcomes (POs): At the end of the MCA programme the learner will possess the following Program Outcome:

PO1: Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.

PO2: Identify, formulate, research literature, and solve *complex* Computing problems reaching substantiated conclusions using fundamental principles of Mathematics, Computing sciences, and relevant domain disciplines.

PO3: Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

PO4: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

PO5: Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

PO6: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice.

PO7: Recognize the need, and have the ability, to engage in independent learning for continual development as a Computing professional.

PO8: Demonstrate knowledge and understanding of computing and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO9: Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

PO10: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.

PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.

PO12: Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.

3. Admission Details:

3.1 Eligibility for Admission: The eligibility criteria for admission for the MCA course will be as decided by the All Indian Council of Technical Education (AICTE), New Delhi and Directorate of Technical Education (DTE), Government of Maharashtra. It will be published on their respective websites time to time.

3.2 Reservation of Seat: The percentage of seat reserved for candidates belonging to backward classes only from Maharashtra State in all the Government Aided, Un-aided Institutions/Colleges and University Departments is as per the norms given by Government of Maharashtra, time to time.

3.3 Selection Basis: The selection would be done as per the guidelines given by the Director of Technical Education, Maharashtra State, time to time.

4. Lecture-Practical/Project-Tutorial (L-P-T)

A course shall have either or all the three components, i.e. a course may have only lecture component, or only practical/project component or a combination of any two/three components

4.1 Lecture(L): Classroom sessions delivered by faculty in an interactive mode. It should be conducted as per the scheme of lectures indicated in respective course.

4.2 Practical/Project(P): Practical / Project Work consisting of Hands-on experience /Field Studies / Case studies that equip students to acquire the much-required skill component. Besides separate Practical/Project course, three courses in each semester include few practical assignments and it will be evaluated under internal evaluation

4.3 Tutorial(T): Session consisting of participatory discussion/ self-study/ desk work/ brief seminar presentations by students and such other novel methods that make a student to absorb and assimilate more effectively the contents delivered in the Lecture sessions

4.4 A Mini project is an assignment that the student needs to complete at the end of every semester in order to strengthen the understanding of fundamentals through effective application of the courses learnt. The details guidelines have been given in the course structure.

4.5 The Project Work to be conducted in the FINAL Semester and evaluated at the end of the semester. The detail guidelines have been in the respective course structure.

4.6 The teaching / learning as well as evaluation are to be interpreted in a broader perspective as follows:
   i)   Teaching – Learning Processes: Classroom sessions, Group Exercises, Seminars, Small Group Projects, Self-study, etc.
   ii) Evaluation: Tutorials, Class Tests, Presentations, Field work, Assignments, competency-based Activity, Research papers, Term papers, etc.

The MCA programme is a combination of:

   a. Three-Credit Courses (75 Marks each): 3 Credits each
   b. Two-Credit Courses (50 Marks each): 2 Credits each
   c. One-Credit Courses (25 Marks each) : 1 Credits each

Following are the session details per credit for each of L-P-T model

   1) **Every <u>ONE-hour session per week</u> of Lecture(L) amounts to <u>1 credit</u> per semester,**
   2) **Minimum of <u>TWO hours per week</u> of Practical(P) amounts to <u>1 credit</u> per semester,**
   3) **Minimum of <u>ONE hours per week</u> of Tutorial(T) amounts to <u>1 credit</u> per semester**

5. Open Courses (OC):

Institute has to offer two open courses of 1 credit each per semester to the students from Semester I to Semester III. The motive behind keeping an open course is to make students aware of current/upcoming trends in Information Technology and other domains. Full autonomy is given to the Institute to plan and execute the open courses. It is expected to extend the autonomy to the student

also. Care must be taken to consider credit points and necessary contact hours assigned to it while finalizing any open course for the given semester. In each semester total 2 credits are reserved for open courses.

Suggestive List of OPEN Courses

	FOR SEMESTER I		FOR SEMESTER II		FOR SEMESTER III
1	Data Privacy and Protection	1	Software Agent	1	Speech Recognition
2	Linux system administration	2	Aptitude building -1	2	Sentiment Analysis
3	social media listening	3	Basics of Tableau	3	R Programming
4	Research Methodology	4	Fraud detection	4	Gesture recognition
5	Applied Statistical Methods	5	Ruby Basics	5	Aptitude building-2
6	Digital Marketing	6	LaTeX	6	Digital Image processing
7	G-Suite	7	Big data Analytics	7	Network Security
8	Joomla	8	Game Programming in Unity	8	big data Technologies
9	e-trading	9	Block Chain Technology	9	AWS Fundamentals
10	Scratch and MIT App Inventor Programming	10	Business Intelligence - be specific	10	Edge Computing
11	Random Forest using MS Excel	11	Design Thinking & Problem-solving skills		
12	WordPress	12	Green Computing		
13	MS-OFFICE	13	IoT		
14	Code ignitor				

6. Extra Reading and Certification:

Each Chapter in the course is added with the extra reading part which gives extra pointer to gain In-depth knowledge apart from basic knowledge imparted in the syllabus. Learners should be encouraged to complete this extra reading portion as regular practice. Also, each course (Where ever applicable) includes suggested certification which help learners to enrich themselves as per industry demands and requirements.

7. Evaluation and Assessment:

In total 112 credits represent the workload of a year for MCA program.

Semester	Credit	IE	UE
Semester I	28	350	350
Semester II	28	350	350
Semester III	28	350	350
Semester IV	28	350	350
Total	112	1400	1400
			2800

The final total assessment of the candidate is made in terms of an internal (concurrent) evaluation and an external (university) examination for each course. In total the internal (concurrent) to external (university) marks ratio is maintained 50:50.

In general

1) For each course, 25 will be based on evaluation and 50 marks for semester end examination conducted by University, unless otherwise stated.
2) The internal evaluation of 25 marks further divided into Written Examination (Assignments/Unit test/written examination etc.), Practicals and Tutorials. The details have been specified in each course.
3) There will be one Practical course and one Mini Project course in each semester with 75 marks allotted for internal evaluation and 50 marks allotted for University examination. External assessment will be done by university appointed examiner. During external examination, examiner should ask the programs/practical ONLY from the work book of the students.
4) The internal marks will be communicated to the University at the end of each semester, but before the semester-end examinations. These marks will be considered for the declaration of the results.

Guidelines to conduct Mini-Project evaluation for Semester I, Semester II and Semester III of MCA – 2020 pattern

For Internal Evaluation

1. Internal evaluation will be of 75 Marks. It will be distributed as follows

Description	Marks
Project Report	35
Viva	15
Working Demo	25
Total	**75**

2. Project Report (including Project Diary) should be evaluated only during INTERNAL evaluation. Textual chapters should be given 10 marks while diagrams, test cases/validations, screen designs should be evaluated for 20 marks and 5 Marks should be given for Project Diary. Thus, totaling up to 35 marks.

For External Evaluation

1. Evaluation will be conducted by one Internal (Appointed by Institute) and one External examiner (Appointed by university).
2. External evaluation will be of 50 Marks. It will be distributed as follows

Description	Marks
Viva	15
Working Demo	35
Total	**50**

For Internal Evaluation and External Evaluation

1. VIVA should be conducted based on project domain and technologies used for developing the project. Every team member's individual contribution to the project may vary. Hence VIVA should be based on individual contribution pertaining to the project.
2. Working Demo is given maximum weightage to make sure that each group submits executable version of their project.
3. Examiners should evaluate efforts and contribution of every individual in the team (in case of group project).
4. Examiner may review code of the project while evaluating its working demo and modules.

Examination: Examinations shall be conducted at the end of the semester i.e. during November and in April/May. However supplementary examinations will also be held in November and April/May.

Concurrent Evaluation: A continuous assessment system in semester system (also known as internal assessment/comprehensive assessment) is spread through the duration of course and is done by the teacher teaching the course. The continuous assessment provides a feedback on teaching learning process. The feedback after being analyzed is passed on to the concerned student for implementation and subsequent improvement. As a part of concurrent evaluation, the learners shall be evaluated on a continuous basis by the Institute to ensure that student learning takes place in a graded manner. Concurrent evaluation components should be designed in such a way that the faculty can monitor the student learning & development and intervene wherever required. The faculty must share the outcome of each concurrent evaluation component with the students, soon after the evaluation, and guide the students for betterment Individual faculty member shall have the flexibility to design the concurrent evaluation components in a manner so as to give a balanced assessment of student capabilities across Knowledge, Skills & Attitude (KSA) dimensions based on variety of assessment tools.

Suggested components for Concurrent Evaluation (CE) are:

1. Case Study / Situation Analysis – (Group Activity or Individual Activity)
2. Class Test
3. Open Book Test
4. Field Visit / Study tour and report of the same
5. Small Group Project & Internal Viva-Voce
6. Learning Diary
7. Scrap Book
8. Group Discussion
9. Role Play / Story Telling
10. Individual Term Paper / Thematic Presentation
11. Written Home Assignment
12. Industry Analysis – (Group Activity or Individual Activity)
13. Literature Review / Book Review
14. Model Development / Simulation Exercises – (Group Activity or Individual Activity)
15. In-depth Viva
16. Quiz

Institute can decide the type, method and frequency of Concurrent Evaluation for each course and execute accordingly. Detailed record of the Concurrent Evaluation shall be maintained by the Institute. The same shall be made available to the University, on demand.

8. Choice based Credit System (CBCS) and Grading:

The detail document about Choice based Credit System for PG Programme is available on university website. The Grading methodology is also available on university website. University reserves rights to revise CBCS and grading system time to time.

9. Medium of Instruction:

The medium of Instruction will be English.

10. Clarification of Syllabus:

It may be necessary to clarify certain points regarding the course. The BOS should meet to study and clarify any difficulties from the Institutes, as and when required.

11. Revision of Syllabus:

As the computer technology is changing very fast, revision of the syllabus should be considered every 2 years.

12. Attendance:

The student must meet the requirement of 75% attendance per semester per course for grant of the term. The Director shall have the right to withhold the student from appearing for examination of a specific course if the above requirement is not fulfilled. Since the emphasis is on continuous learning and concurrent evaluation, it is expected that the student's study all-round the semester. Therefore, there shall not be any preparatory leave before the University examinations.

13. ATKT Rules:

The ATKT rules mention in CBCS handbook (available on university website) is application to MCA Programme.

14. Maximum Duration for completion of the Programme:

The candidates shall complete the MCA Programme WITHIN 5 YEARS from the date of admission, by earning the requisite credits. The student will be finally declared as failed if she/he does not pass in all credits within a total period of four years. After that, such students will have to seek fresh admission as per the admission rules prevailing at that time.

15. Structure of the Programme and detail syllabus of each course:

Semester I

Sr. No.	Course Title	Course Code	CP	EXT	INT
1	Java Programming	IT11	3	50	25
2	Data Structure and Algorithms	IT12	3	50	25
3	Object Oriented Software Engineering	IT13	3	50	25
4	Operating System Concepts	IT14	3	50	25
5	Network Technologies	IT15	3	50	25
6	Open Course 1	OC11	1		25
7	Open Course 2	OC12	1		25
	* Practicals				
8	Practical	IT11L	5	50	75
9	Mini Project	ITC11	5	50	75
	Soft Skills				
10	Soft Skills - I	SS11	1		25
			28	350	350

Semester II

Sr. No.	Course Title	Course Code	CP	EXT	INT
1	Python Programming	IT21	3	50	25
2	Software Project Management	IT22	3	50	25
3	Optimization Techniques	MT21	3	50	25
4	Advanced Internet Technologies	IT23	3	50	25
5	Advanced DBMS	IT24	3	50	25
6	Open Course 3	OC21	1		25
7	Open Course 4	OC22	1		25
	* Practicals				
8	Practical	IT21L	5	50	75
9	Mini Project	ITC21	5	50	75
	Soft Skills				
10	Soft Skills - II	SS21	1		25
			28	350	350

Semester III

Sr. No.	Course Title	Course Code	CP	EXT	INT
1	Mobile Application Development	IT31	3	50	25
2	Data Warehousing and Data Mining	IT32	3	50	25
3	Software Testing and Quality Assurance	IT33	3	50	25
4	Knowledge Representation & Artificial Intelligence - ML, DL	IT34	3	50	25
5	Cloud Computing	IT35	3	50	25
6	Open Course 5	OC31	1		25
7	Open Course 6	OC32	1		25
	* Practicals				
8	Practical	IT31L	5	50	75
9	Mini Project	ITC31	5	50	75
	Soft Skills				
10	Soft Skills- III	SS31	1		25
			28	350	350

Semester IV

Sr. No.	Course Title	Course Code	CP	EXT	INT
1	DevOps	IT41	3	50	25
2	PPM and OB	BM41	3	50	25
2	Project	ITC41	22	250	300
			28	350	350

Semester	Credit	IE	UE
Semester I	28	350	350
Semester II	28	350	350
Semester III	28	350	350
Semester IV	28	350	350
Total	112	1400	1400
			2800

Semester I

Course Code: IT-11
Course Name: Java Programming

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Prerequisite:
  Knowledge of programming structures like decision flows, loops, etc.

Course Objectives:
1. To familiarize students with the concepts of OOPs.
2. To enable the students to understand the core principles of the Java Language and use AWT tools to produce well designed, effective applications.
3. Students will be able to develop server-side applications with database handling using servlets, JSP, JDBC

Course Outcomes:
Student will be able to
  CO1 Understand Basic Concepts of OOPs, Java, Inheritance, Package. (Understand)
  CO2: Understand Exception handling, arrays and Strings and multi-threading in Java
    (Understand.)
  CO3: Understand collection framework (Understand)
  CO4: Develop GUI using Abstract Windows Toolkit (AWT) and event handling (Apply)
  CO5: Develop Web application using JSP and Servlet, JDBC (Apply)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions
1	1. **Introduction -** 1.1 About Java 1.2 Flavours of Java 1.3 Java Installation 1.4 Java Program Development Environment **Extra reading**: docs oracle docs	3	2

2	**2. Object Oriented Programming** 2.1 Class Fundamentals 2.2 Object & Object reference 2.3 Object Life time & Garbage Collection 2.4 Creating and Operating Objects 2.5 Constructor & initialization code block 2.6 Access Control, Modifiers, Use of Modifiers with Classes & Methods. 2.7 Nested, Inner Class & Anonymous Classes, Abstract Class & Interfaces 2.8 Methods, Defining Methods, Argument Passing Mechanism, Method Overloading, Recursion, Dealing with Static Members, Finalize () Method, Native Method. 2.9 Use of "this "reference, 2.10 Design of Accessors and Mutator Methods 2.11 Cloning Objects, shallow and deep cloning 2.12 Generic Class Types. **Extra Reading** : OCA Java Programmer :I Exam Kathy Sierra	8	3
3	**3. Extending Classes and Inheritance** 3.1 Use and Benefits of Inheritance in OOP 3.2 Types of Inheritance in Java 3.3 Inheriting Data members and Methods 3.4 Role of Constructors in inheritance 3.5 Overriding Super Class Methods, Use of "super" 3.6 Polymorphism in inheritance 3.7 Type Compatibility and Conversion 3.8 Implementing interfaces **Extra Reading**: Understanding and practicing above concept in depth - OCA Java Programmer: I Exam Kathy Sierra	6	3
4	**4. Package** 4.1 Organizing Classes and Interfaces in Packages 4.2 Package as Access Protection 4.3 Defining Package 4.4 CLASSPATH Setting for Packages 4.5 Making JAR Files for Library Packages 4.6 Import and Static Import 4.7 Naming Convention for Packages. **Extra Reading**: Oracle Java tutorial	3	2
5	**5. Exception Handling**	6	3

	5.1 The Idea behind Exception 5.2 Exceptions & Errors 5.3 Types of Exception 5.4 Control Flow in Exceptions 5.5 JVM reaction to Exceptions 5.6 Use of try, catch, finally, throw, throws in Exception Handling 5.7 In-built and User Defined Exceptions Checked and Un-Checked Exceptions **Extra Reading**: Oracle Java tutorial		
6	**6. Array & String**: 6.1 Defining an Array 6.2 Initializing & Accessing Array 6.3 Multi –Dimensional Array 6.4 Operation on String, Mutable & Immutable String 6.5 Using Collection Bases Loop for String, Tokenizing a String 6.6 Creating Strings using StringBuffer, String Builder Extra Reading : Java arrays, tokenizer applications– Jenkov Tutorials	4	2
7	**7. Thread** 7.1 Understanding Threads 7.2 Needs of Multi-Threaded Programming 7.3 Thread Life-Cycle 7.4 Thread Priorities 7.5 Synchronizing Threads 7.6 Inter Communication of Threads 7.7 Critical Factor in Thread –Deadlock Extra Reading : Animation Using Thread	6	3

8	**8. A Collection of Useful Classes**
	8.1 Utility Methods for Arrays
	8.2 Observable and Observer Objects,
	8.3 Date & Times,
	8.4 Using Scanner
	8.5 Regular Expression,
	8.6 Input/output Operation in Java (java.io Package)
	8.7 Streams and the new I/O Capabilities
	    8.7.1 Understanding Streams
	    8.7.2 The Classes for Input and Output
	    8.7.3 The Standard Streams
	8.8 Working with File Object
	    8.8.1 File I/O Basics,
	    8.8.2 Reading and Writing to Files
		6	3

	8.8.3 Buffer and Buffer Management **8.8.4** Read/Write Operations with File Channel 8.9 Serializing Objects Extra Reading : regex – Pattern matching, split examples, reading and writing Character Stream, Byte stream and Objects in java files.		
9.	**9. UI Programming** **9.1** Designing Graphical User Interfaces in Java, 9.2 Components and Containers, 9.3 Basics of Components 9.4 Using Containers 9.5 Layout Managers, 9.6 AWT Components 9.7 Adding a Menu to Window 9.8 Extending GUI Features Using Swing Components Extra Reading : Using Swing toolkit GUI –oracle java tutorial	12	5
10	**10. Event Handling** 10.1 Event-Driven Programming in Java 10.2 Event- Handling Process 10.3 Event Handling Mechanism 10.4 The Delegation Model of Event Handling 10.5 Event Classes, Event Sources, Event Listeners 10.6 Adapter Classes as Helper Classes in Event Handling. Extra Reading : Hierarchy of Event Classes, Event Sources, Event Listeners- Oracle java docs	10	4
11	**11. The Collection Framework** 11.1 Introduction to Java Frameworks 11.2 Collections of Objects 11.3 Collection Types, Sets, Sequence, Map 11.4 Understanding Hashing 11.5 Use of ArrayList & Vector 11.6 Java Utilities (java.util Package) Extra Reading : searching, sorting, insertion, manipulation, deletion of data using Java Collections	10	4
12	**12. Database Programming using JDBC** 12.1 Introduction to JDBC 12.2 JDBC Drivers & Architecture 12.3 CURD operation Using JDBC 12.4 Connecting to non-conventional databases	10	4

	Extra Reading: List of JDBC Drivers and Jars, Statement, Prepared Statement and Callable Statement.			

13	**13. Java Server Technologies**
	   13.1 Servlet Web Application Basics,
	   13.2 Architecture and challenges of Web
	         Application
	   13.3 Introduction to servlet
	   13.4 Introduction to JSP
	   13.5 Servlet life cycle
	   13.6 Developing and Deploying Servlets,
	         Exploring Deployment Descriptor
	    (web.xml)
	   13.7 Handling Request and Response.
	
	 Extra Reading : Session handling 4 methods, Request Dispatcher ,JSP Tags, JSP Implicit objects, Generic Servlet
		16	7

	Total:		**100**	**45**

Course References:

Recommended Books:

Text Books:
1. Java Complete Reference Schildt Herbert, TMH.
2. Java Fundamentals (SIE), Schildt Herbert, TMH
3. The Complete Reference JSP, Phil Hanna, TMH
4. JDBC, Servlet and JSP, Black Book, Santosh Kumar K. Dremtech publication

Reference Books:
1. Head First Servlets and JSP, 2nd Edition by Bert Bates, Bryan Basham, Kathy Sierra
2. OCJP Oracle Certified Programmer for Java Study Guide by Kathy Sierra and Bert Bates.
3. A Programmer's Guide to Java OCJP Certification (A Comprehensive Primer) by Khalid A. Mughal and Rolf W. Rasmussen.
4. Java Server Programming Java Ee&(J2EE 1.7), Black Book, Wiley publications

Recommended Learning Material:
1. www.javatpoint.com
2. www.oracle.com
3. www.tutorialspoint.com
4. www.geeksforgeeks.org/java

Recommended Certification:
1. OCA- Oracle Certified Associate
2. OCP- Oracle Certified Professional

Course Code: IT-12
Course Name: Data Structure and Algorithms

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Prerequisite

Loops*,* Functions, Pointers, Arrays, Memory Allocation, Recursion

Course Objectives:

1. To understand basics data structure and algorithms
2. To solve problems using data structures such as linked lists, stacks, queues, hash tables, trees, heaps and graphs
3. To understand various programming techniques such as brute force, greedy, dynamic programming, divide-conquer and backtracking

Course Outcomes:

Student will be able to

CO1: demonstrate linear data structures linked list, stack and queue (apply)
CO2: implement tree, graph, hash table and heap data structures (apply)
CO3: apply brute force and backtracking techniques (apply)
CO4: demonstrate greedy and divide-conquer approaches (apply)
CO5: implement dynamic programming technique (apply)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions

1	**Linked List**
	    1.1 Singly Linked List
	    1.2 Doubly Linked List
	
	Extra Reading: Circular Linked list and Circular doubly linked list
		8	2

2	**Stack and Queues**
	    2.1 Linked List implementation of Stack
	    2.2 Linked List implementation of Queue
	    2.3 Circular Queue
	    2.4 Priority Queue
		10	4

	Extra Reading: Dqueue, Application of Stack		

3	**Tree**
	    3.1 Tree
	    3.2 Binary Search Tree
	    3.3 AVL Tree
	    3.4 Red-Black Tree
	    3.5 Segment Tree - with min/max/sum range queries
	        examples
	                3.6 Fenwick Tree (Binary Indexed Tree)
	
	Extra Reading: Application of Tree, B* tree
		12	5

4	**Graph**
	    4.1 Directed and Undirected Graph
	    4.2 Graph Representations
	        4.2.1 Adjacency Matrix
	        4.2.2 Adjacency List
	     4.3 Graph Traversals
	        4.3.1 BFS
	        4.3.2 DFS
	Extra Reading: Application of Graph in Maps
		8	2

5	**Hash Table and Heaps**
	    5.1 Hash Table
	        5.1.1 Hash Function
	         5.1.2 Hash function approaches
	        5.1.3 Handling the collisions
	     5.2 Heap
	        5.2.1 Min heap and Max heap
	
	Extra Reading: Hashing used in File handling
		7	2

6	**Brute Force**
	    6.1 Linear Search
	    6.2 Rain Terraces
	    6.3 Recursive Staircase
	    6.4 Maximum Subarray
	    6.5 Travelling Salesman Problem
	    6.6 Discrete Fourier Transform
	
	Extra Reading: Application in Cryptography
		10	5

7	**Greedy**
	
	    7.1 Jump Game
	    7.2 Unbound Knapsack Problem
	    7.3 Dijkstra Algorithm
	    7.4 Prim's Algorithm
	    7.5 Kruskal's Algorithm
		10	5

	Extra Reading: Huffman's Tree		
8	**Divide and Conquer** 8.1 Binary Search 8.2 Tower of Hanoi 8.3 Pascal's Triangle 8.4 Euclidean Algorithm 8.5 Merge Sort 8.6 Quicksort 8.7 Fast Powering Extra Reading: Cooley–Tukey Fast Fourier Transform (FFT) algorithm	10	8
9	**Dynamic Programming** 9.1 Fibonacci Number 9.2 Unique Paths 9.3 Longest Common Subsequence (LCS) 9.4 Longest Common Substring 9.5 Longest Increasing Subsequence 9.6 Shortest Common Super sequence 9.7 0/1 Knapsack Problem 9.8 Integer Partition 9.9 Regular Expression Matching Extra Reading: Painting Fence Algorithm, Moser-de Bruijn Sequence, Newman-Conway Sequence	15	7
10	**Backtracking** 10.1 Power Set 10.2 Hamiltonian Cycle 10.3 N-Queens Problem 10.4 Knight's Tour 10.5 Combination Sum Extra Reading: Word Break Problem using Backtracking	10	5
Total:		100	45

Note: Course should be taught independent of any programming language.

Course References:

Recommended Books:

Text Books

1. Jean Paul Tremblay, Paul G. Sorensons, "AN Introduction to Data Structures with Application", McGraw Hall Publication (INDIAN edition)
2. A. V. Aho and J.D. Ullman, "Design and Analysis of Algorithms", Addison Wesley
3. Thomas H Cormen and Charles E.L Leiserson, "Introduction to Algorithm" PHI

Reference Books

1. Lipschutz Schaum's, "Data Structure", Outline Series, MH
2. D. Samanta, "Classical Data Structure", PHI,
3. Practical Approach to Data Structures by Hanumanthappa.
4. Data Structure and Algorithms in C++ by Joshi Brijendra Kumar
5. Data Structures with C++: Schaum's Outlines by Hubbard JohnBressard,
6. Horowitz/Sahani, Fundamental of Algorithm. PHI, Galgotia.
7. Magnifying Data Structures, Arpita Gopal, PHI Publications

Course Code: IT-13
Course Name: Object Oriented Software Engineering

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Prerequisite:
>   Basic System Analysis and Design Concept

Course Objectives:
1. To study basic concepts of software engineering
2. To study phases of SDLC and different process models
3. To learn & understand the Requirement analysis and system Design.
4. To get acquainted with the agile software development methodology

Course Outcomes:
Student will be able to
>   CO1: Distinguish different process model for a software development. (Understand)
>   CO2: Design software requirements specification solution for a given problem definitions of a software system. (Analyze)
>   CO3: Apply software engineering analysis/design knowledge to suggest solutions for simulated problems (Analyze)
>   CO4: Design user interface layout for different types of applications (Apply)
>   CO5: Recognize and describe current trends in software engineering (Understand)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions

1	1. **Introduction to development approach SSAD and OOAD**
	1.1. Overview of Software Development with SSAD
	    1.1.1. Basic System Development Life Cycle with different users and their role in SDLC.
	    1.1.2. Different Approaches and Models for System Development.
	        1.1.2.1. Waterfall Model
	        1.1.2.2. Spiral Model
	        1.1.2.3. Prototyping Model
	        1.1.2.4. RAD
		10	4

	1.1.2.5. Rational Unified Process Extra Reading: Object oriented concepts		

	2. Requirement Engineering
	2.1. Types of Requirements – Functional and Non-functional
	2.2. Four Phases of Requirement Engineering
	2.3. Software requirement Specification (SRS)
	    2.3.1. Structure and contents of SRS
	    2.3.2. IEEE standard format for SRS
	
	Note: Case studies based on SRS
	
	Extra Reading: Fact finding techniques, Feasibility study and reports
		20	9

	3. Use-case Driven Object-Oriented Analysis
	3.1. Introduction to oops concepts
	    3.1.1. Class and object
	    3.1.2. Abstraction and encapsulation
	    3.1.3. Method and messages
	    3.1.4. Interface, Inheritance and polymorphism
	    3.1.5. Structural Diagram - Class Diagram and Object diagram
	    3.1.6. Associations and links
	    3.1.7. Aggregation, Composition and containment
	    3.1.8. Inheritance, Sub Types and IS-A hierarchy
	
	3.2. Behavioral Diagram
	    3.2.1. Use case Diagram
	        3.2.1.1. Identify Actors
	        3.2.1.2. Identify Use cases: describing how the user will use the system
	        3.2.1.3. Develop use-case Model
	        3.2.1.4. Description of Use case Diagram.
	
	    3.2.2. Activity Diagram
	    3.2.3. Sequence diagram
	    3.2.4. Collaboration Diagram.
	    3.2.5. State Transition Diagram
	
	Note: Case studies should be covered on the above topic
	
	Extra Readings: UML diagram drawing tools such as draw.io, Star UML, etc. , Documentation associated with UML diagrams
		40	20

	4. User Interface Design 4.1. Elements of good design 4.2. Eight golden rules for design 4.3. Features of modern GUI, Menus, Scroll bars, windows, buttons, icons, panels, error messages etc. Note: Case studies should be covered on the above topic Extra Readings: UI/UX software, Interactive UI design	10	4

	5. Current trends in Software Engineering
	5.1. Introduction to Web Engineering
	5.2. Agile Process
	    5.2.1. Agile Process Models
	        5.2.1.1. Extreme Programming (XP)
	        5.2.1.2. Adaptive Software Development (ASD)
	        5.2.1.3. Dynamic Systems Development Method (DSDM)
	        5.2.1.4. Scrum
	        5.2.1.5. Crystal
	        5.2.1.6. Feature Driven Development (FDD)
	
	Extra Readings: Comparative analysis of traditional process models and agile, Agile methodology in testing
		20	8

	Total:	**100**	**45**

List of Practical (if any)

Case studies will be given to the student as a part of tutorial. The same diagram should be drawn using UML diagram drawing tool as practical.

Course References:

Recommended Books:

Text Books:
1. Software Engineering by Roger Pressman (6th edition)
2. Object-Oriented Software Engineering: A Use Case Driven Approach by Ivan Jacobson
3. Software Engineering by Sommerville, Pearson,8th Ed
4. Analysis & Design of Information System James Senn, TMH, 2nd Ed
5. Object Oriented System Development - Ali Bahrami McGraw-Hill International Edition
6. Object-Oriented Software Engineering - Ivar Jacobson Pearson Education INC
7. Agile Software Engineering with visual studio by Sam Guckenheimer, Neno Loje.
8. UML Instant – Thomas A Pendar – Wiley Publication

9. UML in Nutshell, O'reilly Pub

Reference Books:

1. Software Requirements by Karl Wiegers
2. Object Oriented Modeling and Design with UML by James Rumbaugh, Michael Blaha
3. Object Oriented Systems and Techniques with UML & Java by Udit Agarwal
4. Software Engineering by Chandramouli Subramanian, Saikat Dutt
5. Object Oriented Systems Analysis and Design using UML by Simon Bennett
6. UML 2 Bible by Tom Pender
7. The Unified Modeling Language user guide by Grady Booch, James Rumbaugh, Ivar Jacobson

Recommended Learning Material:

5. https://www.mooc-list.com/course/object-oriented-design-coursera
6. https://nptel.ac.in/courses/106101061/

Course Code: IT-14
Course Name: Operating Systems Concepts

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	15	10	-	50	75

Course Description:

Prerequisite:
> Basics of Operating System

Course Objectives:
1. To learn the fundamentals of Operating Systems and handle processes and threads and their communication
2. To learn the mechanisms involved in memory management in contemporary OS
3. To know the functionality of Multiprocessor OS and Mobile OS.
4. To gain knowledge on distributed operating system concepts.
5. To learn about Basics of Linux.
6. To learn programmatically to implement Linux OS mechanisms.

Course Outcomes:
Student will be able to

CO1: Understand structure of OS, process management and synchronization. (Understand)
CO2: Understand multicore and multiprocessing OS. (Understand)
CO3: explain Realtime and embedded OS (Understand)
CO4: understand Windows and Linux OS fundamentals and administration. (Understand)
CO5: solve shell scripting problems (Apply)

Course Structure:

Serial No.	Topics Details	Weightage in %	No of Sessions

1	**1. Overview**
	    1.1. Overview of operating systems
	    1.2 Functionalities and Characteristics of OS
	    1.3 Hardware concepts related to OS
	    1.4 CPU states
	    1.5 I/O channels
	    1.6 Memory Management
	        1.6.1 Memory Management Techniques
	        1.6.2 Contiguous & Non-Contiguous allocation
	        1.6.3 Logical & Physical Memory –
		15	7

	Conversion of Logical to Physical address
	1.7 Paging
	    1.7.1 Demand Paging
	    1.7.2 Page Replacement Concept
	1.8 Segmentation - Segment with paging
	1.9 Virtual Memory Concept
	1.10 Thrashing
	
	Extra Reading: Type of OS, Batch OS, Time Sharing OS, Network OS, Multiprogramming OS, Multiprocessing OS, Evolution of Operating System., Computer System Organization Operating System Structure and Operations- System Calls, System Programs, OS Generation and System Boot		

2	2. Process Management and Synchronization
	    2.1 PCB
	    2.2 Job and processor scheduling
	    2.3 Scheduling Concept
	    2.4 Process hierarchies
	    2.5 Problems of concurrent processes
	    2.6 Critical sections
	    2.7 Mutual exclusion
	    2.8 Synchronization
	    2.9 Deadlock
	    2.10 Device and File Management
	        2.10.1 Overview
	        2.10.2 Techniques
	        2.10.3 File Systems
	
	Extra Reading: Threads- Overview, Multithreading models, Threading issues, Process Synchronization – The critical-section problem, Synchronization hardware, Mutex locks, Semaphores, Classic problems of synchronization, Critical regions, Monitors; Deadlock – System model, Deadlock characterization, Methods for handling deadlocks, Deadlock prevention, Deadlock avoidance, Deadlock detection, Recovery from deadlock., Banker's Algorithms
		17	8

3	3. Multiprocessor and Multicore Operating Systems
	    3.1 Introduction
	        3.1.1 Advantages and Disadvantages
	        3.1.2 Multicore System Vs. Multiprocessor System.
	    3.2 Types of Multiprocessors
	        3.2.1 Symmetric Multiprocessors
	        3.2.2 Asymmetric Multiprocessors
	    3.3 Basic Multicore Concepts: Memory Sharing Styles
		17	8

	3.3.1 Uniform Memory Access (UMA)
	3.3.2 Non-Uniform Memory Access (NUMA)
	3.3.3 No Remote Memory Access (NORMA)
	3.4 Cache Coherence, Inter-Process (and inter-core) Communication:
	    3.4.1 Shared Memory
	    3.4.2 Message Passing
	3.5 Mobile Operating Systems
	    3.5.1 Concept Need and Features
	    3.5.2 Types of Mobile OS
	    3.5.3 Overview of Android OS
	    3.5.4 Applications of Mobile OS
	3.6 Distributed Operating Systems
	    3.6.1 Concept Need and Features
	    3.6.2 Examples of Distributed OS with brief introduction
	    3.6.3 Applications of Distributed OS
	
	Extra Reading: Virtual Machine, Cache Memory and Catching Concept, Multi-Processor and Distributed Operating System: – Introduction, – Architecture, – Organization, – Resource sharing, – Load Balancing, – Availability and Fault Tolerance, – Design and Development Challenges, – Inter-process Communication		

4	4. Real Time OS
	   4.1 Introduction and use of RTOS
	      4.1.2 Components of RTOS
	      4.1.3 Types of RTOS
	      4.1.4 Features of RTOS
	      4.1.5 Factors for selecting in RTOS
	      4.1.6 Applications of RTOS
	      4.1.7 Disadvantages of RTOS
	   4.2 Embedded OS
	      4.2.1 Concept Need and Features of embedded OS
	      4.2.2 Examples of embedded OS with brief introduction
	      4.2.3 Applications of embedded OS
	
	Extra Reading: Real Time and Embedded Operating Systems: – Introduction, – Hardware Elements, – Structure Interrupt Driven, Interrupt Driven, Nanokernel, Nanokernel, Microkernel and Microkernel and Monolithic kernel-based models. Monolithic kernel-based models. – Scheduling – Periodic, Periodic, Aperiodic and Aperiodic and Sporadic Tasks, Sporadic
		10	4

		Tasks, – Introduction to Energy Aware CPU Scheduling.		
5	5.Windows OS and Windows Server Architecture	25	12

5. Windows OS and Windows Server Architecture

5.1 Windows OS

    5.1.1 Introduction

    5.1.2 Windows OS Installation

    5.1.3 Process Management

    5.1.4 Control Panel Overview

    5.1.5 Users, Security and Privacy Settings

    5.1.6 Identify Accessibility Settings

    5.1.7 Service Management

    5.1.8 Syncing Devices and File Sharing

    5.1.9Windows Utilities (Accessories, Disk Management, Resource Monitor, Backup and Recovery), Basic Troubleshooting (Networking, Security, Device Driver).

5.2 Introduction to Ubuntu

    5.2.1 Introduction

    5.2.2 Overview of Kernel

    5.2.3 Installation of Ubuntu

    5.2.4 File system

    5.2.5 Basic Commands of Linux

    5.2.6 Managing Processes in Linux

    5.2.7 Installing and deleting software packages

    5.2.8 User Management

    5.2.9 File and Device Management

    5.2.10 Backup and recovery

    5.2.11 Introduction to Graphical Environment (GNOME), Ubuntu Utilities (VirtualBox, Evolution, Gimp, Bleach Bit, Unity Tweak Tool etc.), SAMBA Overview

Extra Reading: Deploying and Managing Windows Server 2012 and 2016, Introduction to Active Directory Domain Services, Managing Active Directory Domain Services Objects, Automating Active Directory Domain Services Administration, Implementing IPv4, Implementing DHCP, Implementing DNS, Implementing Local Storage, Implementing File and Print Services, Implementing Group Policy.

| 6 | 6. Linux Shell Scripting | 16 | 6 |

6. Linux Shell Scripting

    6.1 Introduction

    6.2 Variables

    6.3 Flow Controls

    6.4 Loops

    6.5 Functions

	6.6 Lists 6.7 Manipulating Strings 6.8 Reading and Writing Files 6.9 Positional Parameters 6.10 Case statement 6.11Real time scripts for different system administration activities Extra Reading: Shell Script Programming Concepts, Sequential Flow and Components of Shell Scripting, Decision Structures, Decision-Structure Theory, Statements & Operators, Looping Structures, Loop Theory & Statements, Functions and Arrays, Functions Parts/Libraries & Arrays, Advanced Shell Programming, File Access, Sorts & Techniques, Advanced Tech & Tools , Awk &Sed ,Script Design and Management Issues		
	Total:	**100**	**45**

List of Practicals (if any)

Minimum 5 Practicals to be conducted based on Shell Scripting

Course References:

Recommended Books:

Text Books:

1. "Operating System Concepts", Abraham Silberschatz; Peter Baer Galvin; Greg Gagne, Seventh Edition, John Wiley & Sons, 2004.
2. "Advanced Concepts in Operating Systems– Distributed, Database, and Multiprocessor Operating Systems", Mukesh Singhal and Niranjan G. Shivaratri, Tata McGraw-Hill, 2001.
3. "Understanding the Linux kernel", 3rd edition, Daniel P Bovet and Marco Cesati, O'Reilly, 2005.
4. "Real-Time Systems: Theory and Practice", Rajib Mall, Pearson Education India, 2006.
5. "iPhone iOS 4 Development Essentials – Xcode", Neil Smyth, Fourth Edition, Payload
6. media, 2011.
7. "Microsoft Windows Server Administration Essentials", Tom Carpenter
8. "The Official Ubuntu Book" Eighth Edition, Matthew Helmke, Elizabeth K. Joseph, José Antonio, Rey Philip Ballew, With Benjamin Mako Hill

Reference Books:

1. " Operating Systems: Internals and Design Principles" by William Stallings.
2. " Operating Systems: A Concept-Based Approach" by D M Dhamdhere.
3. System Concepts, 9th Edition, John Wiley & Sons, Inc. by Avi Silberschatz, Peter Baer Galvin, Greg Gagne,
4. D.M Dhamdhere: Operating systems - A concept-based Approach, 3rd Edition, Tata McGraw- Hill, 2012.
5. Operating Systems: Internals and Design Principles, 8th edition Pearson Education Limited, 2014 by William Stallings.
6. Modern Operating system by Andrew Tenenbaum.
7. Distributed Operating System by Andrew Tanenbaum
8. P.C.P. Bhatt: Introduction to Operating Systems Concepts and Practice, 3rd Edition, PHI, 2010.
9. Harvey M Deital: Operating systems, 3rd Edition, Pearson Education, 2011

Recommended Certification:

Windows Server certifications

1. Entry level: IT Infrastructure: Microsoft Technology Associate (MTA) certification.
2. Associate level: Windows Server 2016: Microsoft Certified Solutions Associate (MCSA): Windows Server 2016 certification.
3. Associate level: Windows Server 2012: Microsoft Certified Solutions Associate (MCSA): Windows Server 2012 certification.
4. Expert level: Server infrastructure: Microsoft Certified Solutions Expert (MCSE): Server Infrastructure certification.

Linux Certifications

1. LINUX+ CompTIA
2. RHCE- RED HAT CERTIFIED ENGINEER
3. GCUX: GIAC CERTIFIED UNIX SECURITY ADMINISTRATOR
4. ORACLE LINUX OCA & OCP
5. LPI (LINUX PROFESSIONAL INSTITUTE) CERTIFICATIONS

       LPIC- 1: Linux Administrator
       LPIC- 2: Linux Engineer
       LPIC- 3: Linux Enterprise Professional Certification

Course Code: IT-15
Course Name: Network Technologies

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	Practical	Tutorial		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Prerequisite:

Students should have fundamental knowledge of computer network.

Course Objectives:

1. To understand various computer networks and technologies behind networks
2. To study TCP/IP protocol suite, IP addressing schemes and link layer communication
3. To study routing concept along with Routing protocols
4. To study application layer protocols
5. To understand basics of cryptography and socket programming

Course Outcomes:

Student will be able to

CO1: Understand the basic concepts of Computer Network, and principle of layering (Understand)

CO2: Apply the error detection and correction techniques used in data transmission (Apply)

CO3: Apply IP addressing schemes and sub netting (Apply)

CO4: Understand the concept of routing protocols, Application layer protocols and Network Security (Understand)

CO5: Apply the socket programming basics to create a simple chat application (Apply)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions
1	1. **Introduction to Data Communication and Computer Networks** 1.1. Internet basics and network components. [Transmission Media-Guided, Unguided, Network Devices] 1.2. Various types of Networks (only overview) 1.2.1. Connection Oriented N/Ws Vs Connectionless N/Ws, 1.2.2. Ethernet- Ethernet standards ZigBee, WiFi, Access Technique -CSMA-CD, Negotiation technique Overview	6	3

	1.2.3. Wireless Network 1.3 Unified Communication –VOIP Extra Reading: Switching Techniques, CSMA/CA, CSMA/CD, Unified Communication		
2	2. **Principle of Layering concept** 2.1 Need for layering 2.2 ISO-OSI 7 Layer Model 2.3 TCP/IP model 2.4 OSI Model vs TCP/IP mode Extra Reading: Data Encapsulation, PDU Formation, network devices	12	8
3	3. **Link Layer Communication** 3.1 Error detection and correction techniques 3.2 Framing and its types 3.3 Flow and error control 3.4 HDLC protocol 3.5 P2P Protocol Note: Examples based on 3.1 to be covered Extra Readings: DLL protocol examples, IEEE 802.2 MAC protocol	25	10
4	4. **IP Addressing** 4.1 Internet Protocol and IPv4 Packet format, 4.2 Addressing, Physical Addresses, Logical Addresses Port Addresses, Specific Addresses 4.3 IP Address- Network Part and Host Part 4.4 Network Masks, Network Addresses and, Broadcast Addresses, Loop Back Address 4.5 Address Classes 4.6 TCP and UDP Connections 4.7 TCP Performance in wireless network 4.8 Overview of IPv6 4.9 IP Routing - Types of routing protocol, Border Gateway Protocol (BGP), Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Routing Table concept Notes: Examples based on IP addressing and sub netting to be covered Extra Reading: Network Monitoring Tools –Open NMS, Putty, Wireshark, Nagios core, Cacti	25	10

5	**5. Application Layer Protocols** 5.1 DHCP – DHCP Client, DHCP server, DHCP scope 5.2 DNS – Resolution process, Resource Records, DNS protocol structure 5.3 HTTP – WWW architecture, HTTP: Request and Response Message 5.4 Email protocols – SMTP, POP3, IMAP4 & MIME 5.5 FTP, Telnet Extra Reading: Practical on FTP, Telnet, DNS, Putty	15	6
6	**6. Network Security** 6.1Active and Passive attacks 6.2Cryptography (Symmetric and Asymmetric) 6.3Firewall Extra Reading: Examples on symmetric and asymmetric algorithms	5	2
7	**7. Socket Programming** 7.1 Introduction 7.2 Berkeley Sockets 7.3 Specifying A Protocol Interface 7.4 The Socket Abstraction 7.4.1 System Data Structures for Sockets 7.5 Specifying an Endpoint Address 7.6 A Generic Address Structure 7.7 Major System Calls Used with Sockets 7.8 Utility Routines for Integer Conversion 7.9 Using Socket Calls in A Program (The socket can be created in any language) Extra Reading: Client-Server Architecture and its implementation using Socket programming	12	6
	Total:	**100**	**45**

List of Practical assignments (Socket Programming):

1. Write the client and server programs for establishing termination of connection between client and server using TCP. Assume the server can handle only one client.
2. Write the client and server programs for simple data (hello) transfer between client and server using UDP. Client will send hello server message to the server program. In its reply the server will send hello client message. The server and client programs should reside on different computers in a network.
3. Write the client and server programs for connectionless communication between two different computers in the same TCP/IP network. The server process receives a byte from the client process should and send back an should acknowledgement to the client process.
4. Write program for implementing the sliding window protocol of window size 5.
5. Write the client and server program for implementing the broadcasting in the local network.

Course References:

Recommended Books:

Text Books:

1. Network Essential Notes GSW MCSE Study Notes
2. Internetworking Technology Handbook CISCO System
3. Data and Computer Communication 8th Edition – William Stallings
4. Official Certification guide CCNA 200-301
5. TCP/IP Sockets in JAVA, Practical Guide for Programmers, Kenneth L Calvert, Michael J Donahoo

Reference Books:
1. Data Communication and Networking Behroz A.Forouzan, TMH, 4th Edition
2. Computer Networks and Internets with Internet Applications Douglas Comer
3. Cryptography and Network Security Atul Kahate, TMH 2nd Edition
4. Internetworking With TCP/IP Vol III: Client-Server Programming and Applications BSD Socket Version Second Edition

Recommended Learning Material:

1. https://docs.oracle.com.javase/tutorial/networkingindex.html
2. https://docs.oracle.com/javase/tutorial/networking/overview/networking.html

Recommended Certifications:

1. CISCO Networking Basics Specialization (Coursera) -
2. Network Protocols and Architecture (Coursera)
3. Data Communications and Network Services (Coursera)
4. Computer Networking-Digital Network Security (www.alison.com/course)
5. CCNA (200-301)
6. CCNP Enterprise (300-401 ENCOR)
7. CCNP Security (300-700 SCOR +concentration exam)
8. CCIE Enterprise Infrastructure(300-401 ENCOR + Infrastructure lab v1.0)
9. CCIE Enterprise Wireless CCIE +(300-401 ENCOR +wireless lab v1.0)
10. Microsoft Networking Fundamentals (98-366)
11. Microsoft Security Fundamentals (98-367)

Course Code: IT-11L
Course Name: Practicals

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

This Practical course contains 3 sections. –

1. JavaScript Syllabus
2. GITHUB Syllabus (Not for Evaluation)
3. List of Practicals – Java Programming
4. List of Practicals – Data Structure and Algorithm

Course Outcomes:
Student will be able to

CO1: Demonstrate Collection framework (Apply)
CO2: Develop GUI using awt and swing (Apply)
CO3: Develop Web application using JSP and Servlet, JDBC (Apply)
CO4: Apply Data Structure to solve problems using JavaScript (Apply)

Course Structure:

Syllabus for JavaScript

Sr. No.	Topics Details
1	**Introduction to JavaScript -** History, Features, Application of JavaScript, JavaScript Basics –Data Types, Variables, Identifiers, Constants, Comments, Operators in JavaScript
2	Control and looping structure
3	Array – Concept, Types and Methods
4	Java Script Objects – Object ,Date ,String, Array , Math, Number, Boolean
5	Event handling-Mouse, Keyboard, Form, Window
6	JavaScript BOM –Browser object, Window, Location, Navigator, History Object
7	JavaScript DOM –Document Object and its Methods
8	Form Validations in JavaScript
9	Exception Handling in JavaScript using JavaScript

Sr. No.	Topics Details
1	Introduction to versioning systems
2	creating repositories [local & cloud based]
3	git commands
4	branching & merging
5	conflict resolution (3-way merge)
6	rebasing
7	version control [tagging]

Session on GIT/GITHUB is not for evaluation. It may be conducted by using Demonstration method. The objective of these sessions is "*Students must able to submit their mini-project on GITHUB as project repositories*"

List of Practicals – Java Programing

1. Installation of jdk enviorment & following utilities. What is javac , javap and javadoc.
2. Design an application by using array.
3. Implementation of package, Interface and abstract class
4. Design application using String, StringBuilder, StringTokenizer
5. Test any five of standard exception and user Defined Custom Exceptions in java
6. Threads creation and design applications by using Extending the Thread class/ Implementing the Runnable Interface. Application of multithreading in java.
7. Design java application using Collection in java such as Array List, Link List
8. Design GUI based java application using AWT, Swing with Event Handling.
9. Design a and implement JDBC applications.
10. Design and implement servlet applications.
11. Design and implement JSP applications

List of Practicals – Data Structure and Algorithm Practicals

Following practical must be implemented using JavaScript

1. Demonstrate singly and doubly linked list
2. STACK implementation using Array with PUSH, POP operations
3. Reverse a string using stack
4. Check for balanced parentheses by using Stacks
5. Implement Stack using Linked List
6. Demonstration of Linear Queue, Circular Queue, Priority Queue
7. Reverse stack using queue
8. Practical based on binary search tree implementation with its operations
9. Graph implementation and graph traversals
10. Implementation of Hashing
11. Practical based on Brute Force technique
12. Practical based on Greedy Algorithm-Prim's/Kruskal's algorithm

13. Practical based on Divide and Conquer Technique-Binary Search, Tower of Hanoi
14. Implementation of Dynamic Programming- LCS, Regular Expression Matching
15. Practical based on backtracking- N Queen's problems

Course Code: ITC11
Course Name: Mini Project

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

A mini project is an assignment that the student needs to complete at the end of every semester to strengthen the understanding of fundamentals through effective application of the subjects learnt.

Course Outcomes:
Student will be able to

   CO1: Create working project using tools and techniques learnt in this semester (Create)

Course Structure:

Guidelines for Mini Project

1. Students are expected to undertake one mini project starting from first semester till third semester.
2. The student may take up the mini project in first semester based on the courses learnt in that semester and for every next semester the mini project may be based on the courses learnt in the current semester along with all the subjects learnt in earlier semesters.
3. The student may take up the project individually or in group. However, if project is done in group, each student must be given a responsibility for distinct modules.
4. Selected project/module must have relevant scope as per the marks assigned and must be carried out in the Institute.
5. Internal guide should monitor and evaluate the progress of the project on individual basis through handwritten workbook (Project Diary) maintained by students containing various project milestones with learnings and remarks from internal guide for concurrent evaluation.
6. The Project Synopsis should contain an Introduction to Project clearly stating the project scope in detail justifying enough scope for 125 marks. The project work will carry 75 marks for internal assessment and 50 marks for external assessment.
7. Students are expected to show working demo of the project during final evaluation.
8. **Students are expected to upload mini-project on GITHUB as project repository of the institution.**
9. Students are expected to submit the soft copy of mini project report as a part of final submission.

10. The project will be assessed internally as well as externally by the examiners appointed by University. University may appoint Industry Experts as an external examiner

Semester II

Course Code: IT-21
Course Name: Python Programming

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Prerequisite:
> Object oriented Concepts.

Course Objectives:
1. To understand and use the basic of python.
2. To understand advance concepts of python and able to apply it for solving the complex problems.
3. To understand the reading and writing data through file handling.
4. To understand basic database concepts in python.
5. To develop the critical thinking and analytical approach by using python libraries.

Course Outcomes:
Student will be able to
> CO1: Understand Demonstrate the concepts of python and modular programming. (Understand)
> CO2: Apply the concepts of concurrency control in python (Apply)
> CO3: Solve the real-life problems using object-oriented concepts and python libraries (Apply)
> CO4: Demonstrate the concept of IO, Exception Handling, database (Apply)
> CO5: Analyze the given dataset and apply the data analysis concepts and data visualization. (Analyze)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions

1	1. Introduction & Components of Python
	    1.1. Understanding Python
	    1.2. Role of Python in AI and Data science
	    1.3. Installation and Working with Python
	    1.4. The default graphical development environment for Python - IDLE
	    1.5. Types and Operation
	    1.6. Python Object Types-Number, Strings, Lists, Dictionaries, Tuples, Files, User Defined Classes
		15	7

	1.7. Understanding python blocks 1.8. Python Program Flow Control 1.9. Conditional blocks using if, else and elif 1.10. Simple for loops in python 1.11. For loop using ranges, string, list and dictionaries 1.12. Use of while loops in python 1.13. Loop manipulation using pass, continue, break and else 1.14. Programming using Python conditional and loops block Extra Reading: Python installation with windows, Linux and MAC OS, creating virtual environment, configuring python on EC2 instance, understanding python IDE –[VSCode, PyCharm, Spyder], Installing Anaconda and setting up environment for python		
2	2. Python Functions, Modules & Packages 2.1. Function Basics-Scope, nested function, non-local statements 2.2. built-in functions 2.3. Arguments Passing, Anonymous Function: lambda 2.4. Decorators and Generators 2.5. Module basic usage, namespaces, reloading modules. – math, random, datetime, etc. 2.6. Package: import basics 2.7. Python namespace packages 2.8. user defined modules and packages Extra Readings: GUI framework in python	15	7
3	3. Python Object Oriented Programming 3.1. Concept of class, object and instances, method call 3.2. Constructor, class attributes and destructors 3.3. Real time use of class in live projects 3.4. Inheritance, super class and overloading operators, 3.5. Static and class methods 3.6. Adding and retrieving dynamic attributes of classes 3.7. Programming using OOPS 3.8. Deligation and container Extra Readings: Integrating GUI framework with OOP	15	6
4	4. Python Regular Expression 4.1. Powerful pattern matching and searching 4.2. Power of pattern searching using regex in python 4.3. Real time parsing of data using regex 4.4. Password, email, URL validation using regular expression 4.5. Pattern finding programs using regular expression	10	4

	Extra Readings: Web scrapping and pattern matching with regex		

5	5. Python Multithreading and Exception Handling
	   5.1. Exception Handling
	   5.2. Avoiding code break using exception handling
	   5.3. Safe guarding file operation using exception handling
	   5.4. Handling and helping developer with error code
	   5.5. Programming using Exception handling
	   5.6. Multithreading
	   5.7. Understanding threads
	   5.8. Synchronizing the threads
	   5.9. Programming using multithreading
	
	Extra Readings: Multiprocessing, deadlock, synchronization, monitors and messaging queue
		10	5

6	6. Python File Operation
	   6.1. Reading config files in python
	   6.2. Writing log files in python
	   6.3. Understanding read functions, read(), readline() and readlines()
	   6.4. Understanding write
	   6.5. functions write() and writelines()
	   6.6. Manipulating file pointer using seek
	   6.7. Programming using file operations
	
	Extra Readings: Reading and writing the files on AWS S3 bucket
		5	2

7	7. Python Database Interaction
	   7.1. Introduction to NoSQL database
	   7.2. Advantages of NoSQL database
	   7.3. SQL Vs NoSQL
	   7.4. Introduction to MongoDB with python
	   7.5. Exploring Collections and Documents
	   7.6. Performing basic CRUD operations with MongoDB and python
	
	Extra Readings: Graph database like Neo4j with python
		10	5

8	8. Python for Data Analysis
	   8.1. NumPy:
	   8.2. Introduction to NumPy
	   8.3. Creating arrays, Using arrays and Scalars
	   8.4. Indexing Arrays, Array Transposition
	   8.5. Universal Array Function
	   8.6. Array Input and Output
	   8.7. Pandas:
	   8.8. What are pandas? Where it is used?
	   8.9. Series in pandas, pandas DataFrames, Index objects, ReIndex
		20	9

	8.10. Drop Entry, Selecting Entries 8.11. Data Alignment, Rank and Sort 8.12. Summary Statics, Missing Data, Index Hierarchy 8.13. Matplotlib: 8.14. Python for Data Visualization 8.15. Introduction to Matplotlib 8.16. Visualization Tools Extra Readings: Text analytics with NLP and python		
	Total:	**100**	**45**

Course References:

Recommended Books:

Text Books:

Introduction to Python Programming, By Gowrishankar S, CRC Press

Reference Books:

1. Learning Python 5th ed. by Mark Lutz
2. Python: The Complete Reference by Martin C. Brown
3. Python Data Analytics: With Pandas, NumPy, and Matplotlib 2nd ed. Edition by Fabio Nelli
4. Core Python Programming by Wesley J. Chun Publisher: Prentice Hall
5. Python Programming: A modular approach by Taneja Sheetal, Kumar Naveen
6. Beginner's Guide to Python Programming: Learn Python 3 Fundamentals, Plotting and Tkinter GUI Development Easily by Serhan Yamacli
7. Programming Python, O'reilly, by Mark Lutz
8. Learning Python, O'reilly, Mark Lutz
9. Head First Python, O'reilly, By Paul Barry

Recommended Certifications:

1. Programming, Data Structures and Algorithms Using Python https://swayam.gov.in/nd1_noc19_cs40/preview
2. Data Analytics with Python https://swayam.gov.in/nd1_noc20_cs46/preview

Course Code: IT-22
Course Name: Software Project Management

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Prerequisite:
Basic Software Engineering process

Course Objectives:
1. To learn process of Software Project Management.
2. To Study role of Project Manager in Project Management.
3. To learn Agile Project Management Framework.
4. To study various role of Agile Team and Tools.
5. To understand project planning and tracking.

Course Outcomes:
Student will be able to

CO1: Understand the process of Software Project Management Framework and Apply estimation techniques. (Apply)

CO2: Learn the philosophy, principles and lifecycle of an agile project. (Understand)

CO3: Demonstrate Agile Teams and Tools and Apply agile project constraints and trade-offs for estimating project size and schedule (Apply)

CO4: Explain Project Tracking and Interpretation of Progress Report (Understand)

CO5: Analyze Problem statement and evaluate User Stories (Analyze)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions

1	1. Linear Project Management Framework
	 1.1 Overview of project Management
	 1.2 Project management life cycle-IEEE Life Cycle
	 1.3 Project Management Process
	 1.4 Role of Project Manager
	 1.5 Quality Metrics
	 1.6 Risk Management Process (Case Study Based)
	     1.6.1 Risk Identification
	     1.6.2 Risk Analysis
	     1.6.3 Risk Mitigation
	     1.6.4 RMMM
	 1.7 Hands on MS Project Tool– Resource
		15	6

	Allocation, Scheduling, Gannt chart Note: Case studies based on Risk Management, MS Project tool & Gannt Chart Extra Reading: Different software project management, Types of Risk, Risk Information sheet (RIS), CPM and PERT		

2	**2. Linear Software Project Estimation**
	  2.1 Different methods of Cost estimation
	    2.1.1 COCOMO-I & II model (Problem Statement)
	    2.1.2 Delphi cost estimation
	  2.2 Function Point Analysis (Problem Statement)
	  2.3 The SEI Capability Maturity Model CMM
	  2.4 Software Configuration management
	
	Note: Case studies/Numerical Problems based on COCOMO-I and FPA
	
	Extra Reading: KLOC, Rayleigh Curve, Change Management, Configuration management tool - SVN Tool or Redmine
		20	8

3	**3. Agile Project Management Framework**
	  3.1 Introduction and Definition Agile, Agile Project Life Cycle
	  3.2 Agile Manifesto: History of Agile and Agile Principles
	  3.3 Key Agile Concepts:
	    3.3.1 User stories, Story points
	    3.3.2 Product Backlog
	    3.3.3 Sprint Backlog,
	    3.3.4 Sprint Velocity
	    3.3.5 Swim lanes
	    3.3.6 Minimum Viable Product (MVP)
	    3.3.7 Version and Release
	  3.4 Agile Project Management v/s Traditional Project Management
	
	Note: Case studies based on agile vs. traditional project
	
	Extra Reading: Study Scrum Agile Framework, Agile project management delivery & methodology framework, Software project team management and different team structures
		15	10

4	**4 Agile Teams, Size and Schedule** 4.1 Dynamic System Development Method	15	10

	4.2 Value-Driven Development
	4.3 Team and roles of an Agile Team
	    4.3.1 Scrum Master
	    4.3.2 Product Owner
	    4.3.3 Development Team
	4.4 Product Vision and Product Roadmap
	4.5 Project Objective and Key Metrics
	4.6 Introduction to User Stories
	4.7 Estimate the Product Backlog
	4.8 Techniques for estimating Story Points
	4.9 Plan Product Releases
	4.10 Product Prioritization
	
	Note: Case studies based on Estimation of Product backlog & Story points, design your team and Add screenshots with the caption, Design User stories, log efforts and task in detail
	
	Extra Reading: Personnel Management, Release & iteration planning, eXtreme Programming (XP), Values and Principles, Team Dynamics and Collaboration		

5	**5.Tracking Agile Project and Reports**
	    5.1 Introduction
	    5.2 Plan and Execute Iteration
	    5.3 Facilitate Retrospective, Making Team
	      Decisions and Closing out Retrospective
	    5.4 Agile Reports
	      5.4.1 Daily Reports
	      5.4.2 Sprint Burn down Chart and Reports
	    5.5 Benefits of Agile Project Management
	
	Note: Case studies based on No. of iterations and Project Report, Sprint Chart
	
	Extra Reading: Use of MS Project to track agile project, Agile project management tools, Feature-Driven Development, Agile Metrics
		20	5

6	**6. Implementation with Agile Tools**
	    6.1 Introduction of Agile Tools
	    6.2 Hands on GitHub
	      6.2.1 Create Project using Kanban
	      6.2.2 Project Repositories
	      6.2.3 Continuous Integration
	      6.2.4 Project Backlog
	      6.2.5 Team Management
	      6.2.6 Progress Tracking
		15	6

	6.2.7 Releases
	6.3 Implementation of Problem statement with Agile Tools- GitHub
	    6.3.1Designing Product Vision, Product Backlog,
	    6.3.2 Sprint Backlog, Estimate Story Points
	    6.3.3 Iteration Release
	
	Note: Case study on design of product vision & backlog with features and user stories, Estimation of story points, Design Iteration Plan, Iteration progress and close iteration in detail
	
	Extra Reading: Agile modeling, Explore various Agile Tools		

	Total:	**100**	**45**

List of Practical's (if any)

1. Design Project Management plan template by using MS-Project tool. (Resource allocation, Scheduling, Cost Calculation and Gantt Chart)
2. Create project plan using agile methodologies for the development of web page of Library Management System as a minimum viable product using 3 resources as per sprint planning.
3. Calculate the effort to execute the task and prioritize the task to execute in the current sprint and keep rest of the task in backlog.
4. Demo of the task developed by the developer in the Sprint.
5. Retrospective to discuss about the short coming and improvement of the design and execution of the Sprint task.
6. Check in the developed code in the GitHub repository.

Course References:

Recommended Books:

Text Books:
1. Software engineering principles and practice, McGraw-Hill, Waman S. Javadekar
2. Software Engineering by Pressman
3. Agile Project Management for Dummies, 2nd Edition
4. Coaching Agile Teams: A Comparison for ScrumMasters, Agile Coaches, and Project Managers in Transition, Lyssa Adkins
5. Agile Project Management: Creating Innovative Products (2nd Edition) by Jim Highsmith, Addison-Wesley Professional

Reference Books:

1. Mark C. Layton, Steven J. Ostermiller
2. Agile Estimating and Planning by Mike Cohn Robert C Martin Series
3. Introduction to Software Project Management by Adolfo Villafiorita, CRC Press
4. Agile Project Management with Scrumby Ken Schwaber, Microsoft Press © 2004
5. Agile Project Management QuickStart Guide : The Simplified Beginners Guide to Agile Project Management by ClydeBank Business
6. Agile Product Management with Scrum: Creating Products that Customers Love by Roman Pichler.
7. Scrum Mastery: From Good to Great Servant-Leadership by Geoff Watts
8. Agile Project Management for Dummies by Mark C. Layton
9. The Agile Enterprise: Building and Running Agile Organizations by Mario E. Moreira
10. Scrum: The Art of Doing Twice the Work in Half the Time by Jeff Sutherland
11. Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin
12. Agile Project Management with Kanban   By Eric Brechner
13. Agile Constraints: Creating and Managing Successful Projects with Scrum, Multiple authors

Recommended Learning Material:

1. https://learning.tcsionhub.in/
2. https://www.agilealliance.org
3. http://www.pmi.org
4. https://github.com/topics/kanban
5. https://www.opensourcescrum.com/
6. https://www.scrum.org/resources
7. https://www.tutorialspoint.com/agile/index.htm
8. https://www.atlassian.com/agile
9. https://www.javatpoint.com/agile
10. https://www.guru99.com/agile-testing-course.html
11. https://www.visual-paradigm.com/tutorials/agile-tutorial/

Recommended Certifications:

1. Project Management Professional (PMP)
2. PMI-ACP(Agile Certified Practitioner)
3. Associate in Project Management
4. BVOP Certified Project Manager
5. Certified Associate in Project Management (CAPM)
6. Certified Project Director

7. Certified Project Management Practitioner (CPMP)
8. Certified Project Manager (CPM)
9. Certified ScrumMaster (CSM)
10. CompTIA Project+
11. Master Project Manager (MPM)
12. PRINCE2 Foundation/PRINCE2 Practitioner
13. Professional in Project Management (PPM)
14. Project Management in IT Security (PMITS)
15. APMG International
16. Strategyex Certificate (Associate or Master's) in Agile
17. International Consortium for Agile (ICAgile)
18. Agile Certification Institute
19. Scaled Agile Academy
20. Scrum Alliance
21. Certified Agile Project Manager (IAPM)

Course Code: MT-21
Course Name: Optimization Techniques

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Prerequisite:
>   Basic mathematical knowledge is essentials.

Course Objectives:
1.   To understand the role and principles of optimization techniques in business world.
2.   To understand the process of problem statement formulation of the business scenario.
3.   To understand the implementation of various decision-making techniques in the process of decision making.
4.   To gain the techniques and skills on how to use optimization techniques to support the decision making in business world.

Course Outcomes:

Student will be able to
>   CO1: Understand the role and principles of optimization techniques in business world (Understand)
>   CO2: Demonstrate specific optimization technique for effective decision making (Apply)
>   CO3: Apply the optimization techniques in business environments (Apply)
>   CO4: Illustrate and infer for the business scenario (Analyze)
>   CO5: Analyze the optimization techniques in strategic planning for optimal gain. (Analyze)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions

1	**1. Linear Programming**
	    1.1. Various definitions, statements of basic theorems and properties, Advantages and Limitations,
	    1.2. Application areas of Linear programming
	    1.3. Linear Programming – Concept
	    1.4. Simplex Method and Problems
	    1.5. Two Phase Simplex Method and problems,
	
	Note: Case study-based problems
		20	10

	Extra Readings: Formulation of Linear programming, Solution of LPP using Graphical method		

2	**2. Markov Chains & Simulation Techniques:**
	     2.1 Markov chains: Applications related to technical
	         functional areas,
	     2.2 Steady state Probabilities and its implications,
	     2.3 Decision making based on the inferences
	         Monte Carlo Simulation.
	
	 Extra Readings: Application of Markov chain in Queuing theory, Simulation techniques used in Machine learning and bioinformatics
		15	7

3	**3. Sequential model and related Problems**
	     3.1 Processing n jobs through 2 machines
	     3.2 Processing n jobs through 3 machines
	     3.3 Processing n jobs through m machine
	
	 Extra Readings: Processing of n jobs through m machines
		15	6

4	**4. PERT & CPM**
	     4.1 Basic differences between PERT and CPM.
	     4.2 Network diagram
	     4.3 Time estimates (Forward Pass Computation,
	         Backward Pass Computation
	     4.4 Critical Path
	     4.5 Probability of meeting scheduled date of
	         completion,
	     4.6 Calculation on CPM network.
	     4.7 Various floats for activities
	     4.8 Event Slack
	     4.9 Calculation on PERT network.
	     4.10 Application of schedule based on cost
	         analysis and crashing
	     4.11 Case study-based problems
	
	 Extra Readings: Optimal Cost estimation by crashing the network, Explore the MS Project tool.
		20	10

5	**5. Game Theory**
	     5.1 Introduction
	     5.2 n X m zero sum game with dominance
	     5.3 Solution using Algebraic, Arithmetic and
	         Matrix strategy
	
	 Extra Readings: Learn the difference between Sequential and Simultaneous game
		15	6

6	**6. Decision Analysis**	15	6
	6.1 Introduction to Decision Analysis		
	6.2 Types of Decision-making environment		
	6.3 Decision making under uncertainty and under risk		
	6.4 Concept of Decision Tree		
	Extra Readings: Decision models in Econometrics and computer science		
	Total:	**100**	**45**

List of Practicals (if any)

Practicals to be conducted on the following topics. It is expected that, Applications to be covered using Python and /or R.

1. Linear Programming
2. Markov Chain and Simulation Techniques
3. Sequential models and related problems
4. CPM and PERT
5. Game Theory
6. Decision Analysis

Course References:

Recommended Books:

Text Books:
1. Operations Research by Pannerselvam
2. Operations Research   Theory and Application by J. K. Sharma –Mac-Millan Publication
3. Statistical and Quantative   Methods – Mr. Ranjit Chitale

Reference Books:

1. Statistical Methods – S.P.Gupta, Sultan Chand, New Delhi
2. Operation Research by V. k. Kapoor
3. Operations Research by Kanti Swaroop, P. K. Gupta and Man Mohan
4. Introduction to Operations Research by Hiller & Lieberman, Tata Mc Graw Hill
5. Operations Research by H. A. Taha
6. Operation Research by Hira & Gupta
7. What is Game Theory?, David K. Levine, Economics, UCLA
8. Recommended Learning Material:

Research Software:

1. MS Excel Solver
2. TORA
3. Python and / or R programming

Websites:
1. www.orsi.in
2. www.atozoperationalresearch.com

Websites for practical sessions:
1. https://towardsdatascience.com/linear-programming-and-discrete-optimization-with-python-using-pulp-449f3c5f6e99
2. https://github.com/topics/operations-research?l=python
3. https://github.com/Gabeqb/Linear-Programming-With-Python/commit/a61be0d5fc8e66dd38f3d094bb80cef6a9a04152

Journals:
1. International Journal of Operations Research and Management science
2. International Journal of Operations and Quantitative Management
3. Indian Journal of Advance Operations Management.

Recommended Certifications:

1. Data science with Python
2. Data science with R programing
3. Certification in Machine Learning
4. Certification in Tableau

Course Code: IT-23
Course Name: Advanced Internet Technologies

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Prerequisite:
   Student must have hands-on working knowledge of HTML, CSS, JavaScript and Angular JS

Course Objectives:
1. To impart the design, development and implementation of Dynamic Web Pages.
2. To implement the Latest properties of CSS3
3. To implement the Concept of NodeJS.
4. To develop programs for Web using Angular and SPA.
5. To design and implement dynamic websites with good sense of designing and latest technical aspects.

Course Outcomes:

Student will be able to

   CO1: Outline the basic concepts of Advance Internet Technologies (Understand)

   CO2: Design appropriate user interfaces and implements webpage based on given problem Statement (Apply)

   CO3: Implement concepts and methods of NodeJS (Apply)

   CO4: Implement concepts and methods of Angular (Apply)

   CO5: Build Dynamic web pages using server-side PHP programming with Database Connectivity (Apply)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions
1	**1. Introduction to HTML5** 1.1. Basics of HTML5 – Introduction, features, form new elements, attributes and semantics in HTML5 1.2. <canvas>, <video>, <audio>. 1.3. Introduction to Scalable Vector Graphics (SVG) 1.4. Introduction to Version compatibility 1.5. Installation of Apache Tomcat (Xampp/Lampp/MySQL)	10	5

	Extra Reading: Geo location, Drag, Drop, Web Storage		
2	**2. Introduction to CSS3** 2.1. Architecture of CSS 2.2. CSS Modules 2.3. CSS Framework 2.4. Selectors and Pseudo Classes 2.5. Fonts and Text Effects 2.6. Colors, Background Images, and Masks Extra Reading: Transitions, Transforms and Animations Embedding Media, Gradients, Bootstrap	10	5
3	**3. Node JS** **3.1.** introduction and how it works 3.2. installation of node js 3.3. REPL 3.4. NPM 3.5. How modules work 3.6. Webserver Creation 3.7. Events Extra Reading: Node.js with MySQL	25	12
4	**4. Angular (Latest Stable Version)** 4.1. Introduction (Features and Advantage) 4.2. Type Script 4.3. Modules 4.4. Components 4.5. Directives, Expression, Filters 4.6. Dependency Injection 4.7. Services 4.8. Routing 4.9. SPA (Single Page Application) Extra Reading: Data binding, property binding, Event Binding, Two-way data binding, String Interpolation.	25	12
5	**5. PHP** 5.1. Installing and Configuring PHP 5.2. Introduction 5.2.1. PHP and the Web Server Architecture, PHP Capabilities	30	11

	5.2.2. PHP and HTTP Environment Variables 5.2.3. Variables 5.2.4. Constants 5.2.5. Data Types 5.2.6. Operators 5.2.7. Working with Arrays 5.3. Decision Making, Flow Control and Loops 5.4. Introduction to Laravel 5.5. Creating a Dynamic HTML Form with PHP 5.6. Database Connectivity with MySQL 5.6.1. Performing basic database operations (CRUD) 5.7. Using GET, POST, REQUEST, SESSION, and COOKIE Variables Extra Reading: Sending Emails, PHP with AJAX and XML, Payment Gateway Integration		
Total:		**100**	**45**

Course References:

Recommended Books:

    Text Books:

1. Complete reference HTML, TMH
2. HTML5 & CSS3, Castro Elizabeth 7th Edition
3. Beginning Node.js by Basarat Ali Syed
4. Angular: Up and Running- Learning Angular, Step by Step by Shyam Seshadri
5. Beginning PHP, Apache, MySQL web development

    Reference Books

1. Introducing HTML5 - Bruce Lawson, Remy Sharp
2. Node.js in Action, 2ed by Alex Young, Bradley Meck
3. Mastering Node.js by Pasquali Sandro
4. Angular Essentials by Kumar Dhananjay
5. Complete Ref. PHP

Recommended Learning Material:

- MOOC Courses

    1) Introduction to HTML5 – University of Michigan
    https://www.coursera.org/learn/html

2) **Introduction to Web Development – University of California**
   https://www.coursera.org/learn/web-development
3) **HTML, CSS and JavaScript for Web Developers – Johns Hopkins University**
   https://www.coursera.org/learn/html-css-javascript-for-web-developers
4) **Web Design for Everybody: Basics of Web Development & Coding Specialization – University of Michigan**
   https://www.coursera.org/specializations/web-design
5) **Introduction to CSS3 – University of Michigan**
   https://www.coursera.org/learn/introcss
6) **Server-side Development with NodeJS, Express and MongoDB – The Hong Kong University of Science and Technology**
   https://www.coursera.org/learn/server-side-nodejs
7) **Front-End Web UI Frameworks and Tools: Bootstrap 4 – The Hong Kong University of Science and Technology**
   https://www.coursera.org/learn/bootstrap-4
8) **Front-End JavaScript Frameworks: Angular – The Hong Kong University of Science and Technology**
   https://www.coursera.org/learn/angular
9) **Single Page Web Applications with AngularJS – John Hopkins University**
   https://www.coursera.org/learn/single-page-web-apps-with-angularjs
10) **Building Web Applications in PHP – University of Michigan**
    https://www.coursera.org/learn/web-applications-php
11) **Building Database Applications in PHP – University of Michigan**
    https://www.coursera.org/learn/database-applications-php
12) **Web Applications for Everybody Specialization**
    https://www.coursera.org/specializations/web-applications

- Other Learning Material

  - ❖ **HTML 5, CSS3, JavaScript**
    - o https://www.htmldog.com/
    - o https://www.w3schools.com/
    - o https://qhmit.com/
    - o http://www.landofcode.com/
    - o https://www.codecademy.com/
    - o http://www.echoecho.com/html.htm
    - o https://www.awwwards.com/
  - ❖ **Bootstrap**
    - o https://www.w3schools.com/bootstrap4/
    - o https://getbootstrap.com/
    - o https://www.freecodecamp.org/news/learn-bootstrap-4-in-30-minute-by-building-a-landing-page-website-guide-for-beginners-f64e03833f33/
    - o https://www.freecodecamp.org/news/want-to-learn-bootstrap-4-heres-our-free-10-part-course-happy-easter-35c004dc45a4/
  - ❖ **NodeJS**
    - o https://nodejs.org/en/docs/guides/
    - o https://www.w3schools.com/nodejs/
    - o https://www.nodebeginner.org/
    - o http://visionmedia.github.io/masteringnode/

  - ❖ **Angular**

- o https://www.c-sharpcorner.com/topics/angular-8
- o https://www.javatpoint.com/angular-8
- ❖ **PHP**
  - o https://www.php.net/manual/en/index.php
  - o https://phptherightway.com/
  - o https://www.tutorialspoint.com/php/php_useful_resources.htm
  - o https://www.w3schools.com/php/

Recommended Certifications:

1. Microsoft HTML5 and CSS3 (https://www.microsoft.com/en-us/learning/exam-70-480.aspx)

2. Certification available on Coursera and Udemy.

Course Code: IT-24
Course Name: Advanced DBMS

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	15	10	-	50	75

Course Description:

Prerequisite:
Basics of Database Concepts

Course Objectives:
1. To understand core concepts of database management system and its types
2. To provide database design approaches using E-R model and normalization
3. To discuss transaction management and concurrency control
4. To gain an awareness of the structure of object-oriented database and its applications
5. To gain familiarization of Database crash, recovery concepts and security issues
6. To Demonstrate SQL, XML schema and NO SQL database

Course Outcomes:
Student will be able to

CO1: Describe the core concepts of DBMS and various databases used in real applications (Understand)

CO2: Design relational database using E-R model and normalization (Apply)

CO3: Demonstrate XML database and nonprocedural structural query languages for data access (Apply)

CO4: Explain concepts of Parallel, Distributed and Object-Oriented Databases and their applications (Understand)

CO5: Apply transaction management, recovery management, backup and security – privacy concepts for database applications (Apply)

Course Structure:

Sr. No.	Topics Details	Weightage in %	No of Sessions
1	1. **Introduction DBMS – Concepts & Architectures** 1.1 Database and Need for DBMS, Characteristics of DBMS 1.2 Database 3-tier schema (ANSI/SPARC) and system architecture of DBMS 1.3 Views of data- Schemas and instances, Data Independence	10	4

	1.4 Centralized, Client-Server system, Transaction servers, Data servers, Cloud based servers Extra Reading: Indexing and Hashing - Basic concepts of indexing, ordered index, B+ tree index, B+ tree extensions, Multiple key access, Hashing concepts, types of hashing, Bitmap indices		
2	**2. Data Modelling and Relational Database Design** 2.1 Data Modelling using ER Diagram: Representation of Entities, Attributes, Relationships and their Type, Cardinality, Generalization, Specialization, Aggregation. 2.2 Relational data model: Structure of Relational Database Model, Types of keys, Referential Integrity Constraints 2.3 Codd's rules 2.4 Database Design using E-R, E-R to Relational 2.5 Normalization – Normal forms based on primary (1 NF, 2 NF, 3NF, BCNF) Note: Case studies based on E-R diagram & Normalization Extra Reading: Database languages - Relational Algebra, Relational database languages, Data definition in SQL, Views and Queries in SQL, Joins, specifying constraints and Indexes in SQL, Specifying constraints management systems Postgres/ SQL/MySQL	16	8
3	**3. Transaction and Concurrency control** 3.1. Concept of transaction, ACID properties, States of transaction 3.2. Concurrency control, Problems in concurrency controls 3.3. Scheduling of transactions, Serializability and testing of serilaizibity 3.4. Lock-based Protocol and Time stamp-based ordering protocols 3.5. Deadlock Handling Extra Readings: Semantic data controls & Multi-version concurrency control	13	6
4	**4. Parallel Databases** 4.1. Introduction to Parallel Databases 4.2. Parallel Database Architectures 4.3. I/O parallelism 4.4. Inter-query and Intra-query parallelism 4.5. Inter-operational and Intra-operational parallelism	13	6

	4.6. Key elements of parallel database processing: Speed-up, Scale-up Synchronization and Locking Extra Readings: Parallel handling and Load balancing		
5	**5. Distributed Databases** 5.1. Introduction to Distributed Database System 5.2. Homogeneous and Heterogeneous Databases 5.3. Distributed data storage (Fragmentation and Replication) 5.4. Distributed transactions 5.5. Concurrency control schemes in DDBMS 5.6. Commit protocols 2 phase and 3 Phase Commit Protocol Extra Readings: Reliability issues in DDBMS and Web based interface of DDBMS	13	6
6	**6. Object Oriented Databases & Applications** 6.1. Overview of Object- Oriented Database concepts & characteristics 6.2. Database design for OODBMS – Objects, OIDs and reference type 6.3. Spatial data and Spatial indexing (Any two techniques) 6.4. Mobile Database: Need, Structure, Features, Limitations and Applications 6.5. Temporal databases, temporal aspects valid time, transaction time or decision time 6.6. Multimedia Database: Architecture, Type and Characteristics	10	4
7	**7. Crash Recovery and Backup** 7.1. Failure classifications 7.2. Recovery & Atomicity 7.3. Log based recovery 7.4. Checkpoint and Shadow Paging in Data recovery 7.5. Database backup and types of backups Extra Readings: Role and Functions of Database administrator	10	5
8	**8. Security and Privacy** 8.1. Database security issues 8.2. Discretionary access control based on grant & revoking privilege 8.3. Mandatory access control and role-based access control for multilevel security 8.4. Encryption & public key infrastructures	10	4
9	**9. NO-SQL Database** Introduction, Types of NOSQL, Need of NoSQL	5	2

	databases, Use Cases		
	Total:	**100**	**45**

List of Practicals (if any)

1. To install and configure database software (ORACLE/MYSQL)
2. To design a database (logical & physical database)
3. To Perform all SQL operations and queries on designed physical database
4. To install and configure NO-SQL database and practice for core operations
5. To perform experiments on database crash and recovery
6. To perform experiments on database Backup – restoring operations on database server
7. To perform some operations on Object oriented databases

Course References:

Recommended Books:

Text Books:
1.
2. Introduction to database systems C.J. Date, Pearson.
3. Fundamentals of Database Systems by Elmasri Navathe
4. Principles of Database Management James Martin, PHI
5. Database System Concepts by Abraham Silberschatz, H. Korth, Sudarshan

Reference Books:

1. Database Management System by Raghu Ramakrishnan / Johannes Gherke
2. Database Management System (DBMS)A Practical Approach. By Rajiv Chopra
3. Database system practical approach to design, implementation & management by Connoly & Begg,
4. NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence Martin Fowler

Recommended Certifications:

1. Oracle certified associate (OCA)
2. Oracle certified professional (OCP)
3. Database administrator (DBA)
4. Database related certification courses available at NPTEL/Coursera/Udemy

Course Code: IT-21L
Course Name: Practicals

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

This Practical course contains 2 sections. –

1. List of Practicals – Python Programming
2. List of Practicals – Advanced Internet Technologies

Course Outcomes:

Student will be able to

CO1: implement python programming concepts for solving real life problems. (Apply)
CO2: Implement Advanced Internet Technologies (Apply)

Course Structure:

List of Practicals – Python Programming

Note:
- Recommended IDE for python – IDLE
- Exception handling concepts should be used with file handling programs.

1. Python installation and configuration with windows and Linux
2. Programs for understanding the data types, control flow statements, blocks and loops
3. Programs for understanding functions, use of built in functions, user defined functions
4. Programs to use existing modules, packages and creating modules, packages
5. Programs for implementations of all object-oriented concepts like class, method, inheritance, polymorphism etc. (Real life examples must be covered for the implementation of object-oriented concepts)
6. Programs for parsing of data, validations like Password, email, URL, etc.
7. Programs for Pattern finding should be covered.
8. Programs covering all the aspects of Exception handling, user defined exception, Multithreading should be covered.
9. Programs demonstrating the IO operations like reading from file, writing into file from different file types like data file, binary file, etc.
10. Programs to perform searching, adding, updating the content from the file.

11. Program for performing CRUD operation with MongoDB and Python
12. Basic programs with NumPy as Array, Searching and Sorting, date & time and String handling

13. Programs for series and data frames should be covered.
14. Programs to demonstrate data pre-processing and data handling with data frame
15. Program for data visualization should be covered.

List of Practicals – Advanced Internet Technologies

1. Program to implement Audio and Video features for your web page.
2. Program to design form using HTML5 elements, attributes and Semantics.
3. Programs using Canvas and SVG.
4. Programs to demonstrate external and internal styles in the web page using font, text, background, borders, opacity and other CSS 3 properties.
5. Implement Transformation using Translation, Rotation and Scaling in your web page.
6. Program to show current date and time using user defined module
7. Program using built-in modules to split the query string into readable parts.
8. Program using NPM which will convert entered string into either case
9. Write a program to create a calculator using Node JS. (Install and configure Node JS and Server)
10. Write Program for Form validation in Angular.
11. Program to demonstrate the ngif, ngfor, ngswitch statements.
12. Create angular project which will demonstrate the usage of component directive, structural directive and attribute directives
13. Create angular project which has HTML template and handle the click event on click of the button (Installation of Angular and Bootstrap 4 CSS Framework)
14. Program for basic operations, array and user interface handling.
15. Program to demonstrate session management using various techniques.
16. Program to perform the CRUD Operations using PHP Script.

Course Code: ITC21
Course Name: Mini Project

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

A mini project is an assignment that the student needs to complete at the end of every semester to strengthen the understanding of fundamentals through effective application of the subjects learnt.

Course Outcomes:
Student will be able to

CO1: Create working project using tools and techniques learnt in this semester (Create)

Course Structure:

Guidelines for Mini Project

1. Students are expected to undertake one mini project starting from first semester till third semester.
2. The student may take up the mini project in first semester based on the courses learnt in that semester and for every next semester the mini project may be based on the courses learnt in the current semester along with all the subjects learnt in earlier semesters.
3. The student may take up the project individually or in group. However, if project is done in group, each student must be given a responsibility for distinct modules.
4. Selected project/module must have relevant scope as per the marks assigned and must be carried out in the Institute.
5. Internal guide should monitor and evaluate the progress of the project on individual basis through handwritten workbook (Project Diary) maintained by students containing various project milestones with learnings and remarks from internal guide for concurrent evaluation.
6. The Project Synopsis should contain an Introduction to Project clearly stating the project scope in detail justifying enough scope for 125 marks. The project work will carry 75 marks for internal assessment and 50 marks for external assessment.
7. Students are expected to show working demo of the project during final evaluation.
8. **Students are expected to upload mini-project on GITHUB as project repository of the institution.**
9. Students are expected to submit the soft copy of mini project report as a part of final submission.
10. The project will be assessed internally as well as externally by the examiners appointed by University. University may appoint Industry Experts as an external examiner
11.

Savitribai Phule Pune University, Pune

Faculty of Commerce and Management

Master of Computer Applications (MCA)

Programme Curriculum (Sem. III & IV)
(2020-2022)

Semester III

Course Code: IT-31
Course Name: Mobile Application Development

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Course Objectives:
1. To understand the different mobile application Architectures.
2. To understand different types of widgets like buttons, views, layout etc.
3. To know the ways of application handling like intents, adapters, Notifications, Web Services and Web View.
4. To learn and know about data storing, retrieval and sharing in android.
5. To explore cross platform mobile application development framework, React Native and Flutter.

Course Outcomes:
Student will be able to
CO1: Understand Various Mobile Application Architectures. (Understand)
CO2: Apply different types of widgets and Layouts. (Apply)
CO3: Describe Web Services and Web Views in mobile applications. (Understand)
CO4: Implement data storing and retrieval methods in android. (Apply)
CO5: Demonstrate Hybrid Mobile App Framework. (Apply)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions

1	1. Mobile application development architectures
	    1.1. Introduction to Mobile Application technologies
	    1.2. Android Architecture
	    1.3. IOS Architecture
	    1.4. Windows Architecture
	    1.5. Hybrid Architecture
		14	5

2	2. Creating Android Application
	    2.1. Creating Android project
	    2.2. Project Structure
	    2.3. Activity and Activity Life Cycle
	    2.4. Fragment and Fragment Life Cycle
	    2.5 Views and View groups
		20	10

3	3. Interactivity Tools
	    3.1. Intents and Filters
	    3.2. Adapters
	    3.3. Dialogs
	    3.4. Menus
	    3.5. Notifications
		20	10

4	4. Interaction with Database
	    4.1. Introduction to Database (SQLite and Firebase)
	    4.2. Cursors and content values
	    4.3. CURD Operations
		16	6

5	5. Web Services and Web View
	    5.1. Introduction to web services
	    5.2. Receiving HTTP Response (JSON, XML)
	    5.3. Parsing JSON and XML
	    5.4. Introduction to Web View
		12	5

6	6. React Native
	    6.1. Introduction
	    6.2. Environment Setup
	    6.3. JavaScript ES6 Overview
	    6.4. Create React Native App
	    6.5. React Native Alert API
	    6.6. React Native Geolocation API
	    6.7. Third Party Libraries
		10	5

7	7. Introduction Flutter
	    7.1. Overview of Flutter
	    7.2. Installation of Flutter
	    7.3. Architecture of Flutter
	    7.4. Introduction to Dart Programming
	    7.5. Demonstration of Simple application
		8	4

	Total:	**100**	**45**

Course References:

Reference Books:

1. Professional Android 4 Application Development by Meier, Reto - Wiley Education
2. Beginning Android 4 Application Development by Lee, Wei- Meng - Wiley Education
3. Android application Development: in 24 hours by Delessio, Carmen; Darcey, Lauren; Conder, Shane - Pearson Education
4. Android by Dixit, Prasanna Kumar - Vikas Publishing House
5. Android Studio Development Essentials Book by Neil Smith
6. Beginning App Development with Flutter by Rap Payne
7. Flutter in Action by Eric Windmill
8. REACT NATIVE IN ACTION DEVELOPING IOS AND ANDROID APPS WITH JAVASCRIPT BOOK BY NADER DABIT

Web Reference:

1. https://developer.android.com
2. https://facebook.github.io/react-native/docs/tutorial
3. https://flutter.dev/docs/get-started/install

Course Code: IT-32
Course Name: Data Warehousing and Data Mining

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Course Objectives:
1. To introduce the concepts, techniques and applications of data warehousing and data mining.
2. To understand how to Preprocess, understand and analyze various kinds of data
3. To Study data warehouse Concepts, architectures, OLAP and the project planning aspects in building a data warehouse
4. To enable students to understand and implement various techniques of association, classification and clustering in data mining
5. To enable students to understand and implement the concepts of Web mining and Text Mining in data mining

Course Outcomes:
Student will be able to

CO1: Understand Data warehouse concepts, architecture and models (Understand)

CO2: Learn and understand techniques of preprocessing on various kinds of data (Understand)

CO3: Apply association Mining and Classification Techniques on Data Sets (Apply)

CO4: Apply Clustering Techniques and Web Mining on Data Sets (Apply)

CO5: Understand other approaches of Data mining (Understand)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions

1	1. Data Warehouse Fundamentals
	   1.1. Introduction to Data Warehouse, OLTP Systems; Differences between OLTP Systems and Data Warehouse:
	   1.2. Characteristics of Data Warehouse; Functionality of Data Warehouse:
	   1.3. Advantages and Applications of Data Warehouse; Top- Down and Bottom-Up Development Methodology:
	   1.4. Tools for Data warehouse development: Data
		15	6

	Warehouse Types 1.5. Planning and Project Management in constructing Data warehouse: Data Warehouse Project; 1.6. Data Warehouse development Life Cycle, Kimball Lifecycle Diagram		
2	2. Data Warehouse Architecture 2.1. Introductions, Components of Data warehouse Architecture 2.2. Technical Architectures; Federated Data Warehouse Architecture: Tool selection; 2.3. Dimensional Modeling: E-R Modeling VS Dimensional Modeling 2.4. Data Warehouse Schemas; Star Schema, Inside Dimensional Table, Inside Fact Table, Fact Less Fact Table, Granularity, Star Schema Keys: Snowflake Schema, Fact Constellation Schema 2.5. Introduction to Metadata : Categorizing Metadata: 2.6. Metadata management in practice; Meta data requirements gathering, Metadata classification, Meta data collection strategies, Tools for Metadata Management	15	6
3	3. Data Preprocessing and ETL 3.1. Data Pre-processing: Data Cleaning tasks 3.2. Data Integration and Data Reduction 3.3. Discretization and Concept Hierarchy Generation 3.4. Data Transformation; Basic Tasks in Transformation, Major Data Transformation Types 3.5. Introduction to ETL(Extract, Transform and Load) 3.6. ETL requirements and steps: Data Extraction; Extraction Methods, Logical Extraction Methods, Physical Extraction Methods 3.7. Data loading; Data Loading Techniques, ETL Tools	20	7
4	4. Data Warehouse & OLAP: 4.1. Introduction: What is OLAP?; Characteristics of OLAP, 4.2. Steps in the OLAP Creation Process, OLAP operations, Advantages of OLAP: Multidimensional Data: 4.3. OLAP Architectures; MOLAP, ROLAP, HOLAP: 4.4. Data Warehouse and OLAP: Hypercube & Multicubes	10	5
5	5. Introduction to Data Mining: 5.1. Introduction and Scope of Data Mining 5.2. How does Data Mining Works, Predictive Modeling 5.3. Data Mining and Data Warehousing 5.4. Architecture for Data Mining	5	4

	5.5. Profitable Applications: Data Mining Tools:		
6	6. Data Mining Techniques 6.1. An Overview: Introduction, Data Mining, Data Mining Versus Database Management System, 6.2. Data Mining Techniques- Association rules(Apriori, FP Tree algorithms) 6.3. Classification (Decision Tree induction, Bayesian classification, SVM, KNN) 6.4. Clustering, Neural networks. 6.5. Evaluating Association rules , Classification model	15	6
7	7. Clustering 7.1. Introduction to Clustering, Cluster Analysis 7.2. Clustering Methods- K means, Hierarchical clustering, Agglomerative clustering, Divisive clustering, 7.3. clustering and segmentation software 7.4. Evaluating clusters 7.5. Data Mining trends and Applications	10	5
8	8. Web Mining 8.1. Introduction, Terminologies 8.2. Categories of Web Mining: Web Content Mining, Web Structure Mining, Web Usage Mining 8.3. Applications of Web Mining, and Agent based and Database approaches, Web mining Software/Tools. 8.4. Text Mining: process and types, steps in Text Mining, applications and tools of Text Mining 8.5. Data visualization, Dashboard- KPI, Business Intelligence and its future.	10	6
	Total:	**100**	**45**

List of Practicals (if any)

1. Creating a simple data warehouse & performing OLAP operations using simple tools
2. Extracting data from any Operational database (ETL) and performing pre-processing tasks
3. Performing association mining on large data sets and extracting best possible rules / a case study
4. Performing classification and evaluating the efficient model / a case study
5. A case study on finding efficient Clusters on very large set of documents data
6. A case study on Web mining and Text mining using software tools

Students may practice or implement Data warehouse, ETL & Data mining concepts on the following software/ tools (Students versions) at on premise / Cloud based platform

1) Data warehouse - My-SQL, MongoDB / Google BigQuery / Amazon Redshift / Talend
2) ETL Tools : Pentaho Kettle / Talend-Open Studio / Apache Kafka / Informatica Power Center
3) BI and Analytics tools : Python / XL-Miner, R-Studio / Rapid-Miner Studio
4) Visualization Tools : Tableau / Power-BI / Qlick sense

Course References:

Recommended Books:

Text Books:

1. Data Mining: Introductory and Advanced Topics, by Margaret Dunham, Pearson Education
2. Data Mining by Arun K. Pujari – University Press.

Reference Books:

1. DATAWAREHOUSING FUNDAMENTALS: A COMPREHENSIVE GUIDE FOR IT PROFESSIONALS, by Paulraj Poonniah, Latest Edition
2. Building the Data Warehouse, 3rd edition by W. H. Inmon
3. Data Mining concepts and Techniques by Jiawei Han, Micheline Kambler –Elsevier.
4. Data Mining practical Machine Learning Tools and Techniques by Ian H. Witten Eibe Frank Mark Hall - Elsevier publication
5. Introduction to Data Mining with Case Studies by G. K. Gupta, Prentice Hall

Web Reference:

1. www.ibm.com/in/en/
2. www.pentaho.com/
3. www.jaspersoft.com/
4. www.amazon.com/Data-Mining-Business-Intelligence-Applications
5. www.ibm.com/insights/in
6. www.sas.com
7. Weka– Data Mining with Open Source Machine Learning Software, www.cs.waikato.ac.nz/ml/weka.
8. https://cloud.google.com/bigquery/
9. https://www.rstudio.com/ 10.https://aws.amazon.com/redshift/

Course Code: IT-33
Course Name: Software Testing and Quality Assurance

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Course Objectives:

1. To understand the principles of software development emphasizing processes and activities of quality assurance
2. To study fundamental concepts in software testing, including software testing objectives, process, strategies and methods.
3. To understand test design techniques based on functionality and structure of software
4. To understand test planning, monitoring and control process
5. To gain the techniques and skills on how to use software testing tools to support software testing activities

Course Outcomes:

Student will be able to

CO1: Understand the role of software quality assurance in contributing to the efficient
delivery of software solutions. (Understand)

CO2: Demonstrate specific software tests with well-defined objectives and targets. (Apply)

CO3: Apply the software testing techniques in commercial environments. (Apply)

CO4: Construct test strategies and plans for software testing. (Analyze)

CO5: Demonstrate the usage of software testing tools for test effectiveness, efficiency and
coverage (Apply)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions

1	1. Software Quality Assurance Fundamentals
	  1.1. Definition of Quality, Quality Assurance, Quality Control, Difference between QA and QC, Software Quality Assurance Challenges
	  1.2. Software Quality Assurance, SQA Planning & Standards (ISO 9000, Six Sigma)
	  1.3. SQA Activities
		20	6

	1.4. Building Blocks of SQA 1.5. Software Quality factors 1.6. Software Quality Metrics: Process Metrics & Product Metrics 1.7. Software Reliability & Reliability Measurement Factors: ROCOF, MTTF, MTTR, MTBF, POFOD, Availability Extra Reading: ISO/IEC 9126, ISO/IEC 25010:2011, Malcom Balridge		

2	2. **Software Testing Fundamentals**
	2.1. Definition & Objectives of Testing
	2.2. Role of testing and its effect on quality
	2.3. Causes of software failure: Definition of -Error, Bug, Fault, Defect and Failure,
	2.4. Economics of Testing
	2.5. Seven Testing Principles
	2.6. Software Testing Life cycle
	2.7. Validation & Verification Concepts - V Model and W Model
	2.8. Agile Testing- Test Driven Software Development
	2.9. Levels of Testing-
	    2.9.1. Unit (Component) Testing
	    2.9.2. Integration Testing
	    2.9.3. System Testing
	    2.9.4. User Acceptance Testing (UAT)
	2.10. Test Types
	    2.10.1. Functional testing (Black-box)
	    2.10.2. Non-functional testing (Testing of software product characteristics)
	    2.10.3. Structural testing (White-box)
	    2.10.4. Testing related to changes - Confirmation (Re-testing) and Regression Testing
	2.11. Non-Functional Testing Types –
	    2.11.1. Performance (Load & Stress)
	    2.11.2. Usability
	    2.11.3. Maintainability
	    2.11.4. Portability
	    2.11.5. Security
	    2.11.6. Localization & Internationalization
	2.12. Concept of Smoke testing and Sanity Testing
		17	10

3	3. **Static Testing**
	3.1. Static Techniques – Review
	    3.1.1. Review Process (Informal & Formal)
	    3.1.2. Desk Checking,
	    3.1.3. Technical or Peer Review
	    3.1.4. Walkthrough
		8	3

	3.1.5. Inspection
	3.2. Static Techniques – Static Analysis
	    3.2.1. Data flow analysis
	    3.2.2. Control flow analysis,
	    3.2.3. Static Analysis by Tools (Automated Static Analysis)
	
	Case Study on Preparation of Inspection Checklist		

4	4. Dynamic Testing
	  4.1. Test Design Techniques-Black Box Testing Techniques:
	    4.1.1. Equivalence Partitioning
	    4.1.2. Boundary Value Analysis
	    4.1.3. Decision Table Testing
	    4.1.4. State Transition Testing
	  4.2. Test Design Techniques -White Box Testing Techniques (coverage based and fault-based)
	    4.2.1. Statement coverage
	    4.2.2. Branch & Decision coverage
	    4.2.3. Path coverage
	    4.2.4. McCabe's Cyclomatic Complexity Metric (Computation of Cyclomatic Complexity to be covered)
	    4.2.5. Data Flow based Testing
	    4.2.6. Mutation Testing
	  4.3. Test Design Techniques -Experience based techniques:
	    4.3.1. Error Guessing
	    4.3.2. Exploratory Testing
	
	Problems based on Black Box and White Box Testing Techniques to be covered
		15	7

5	5. Test Management
	  5.1. Test Organization- Roles & Skills of Tester, Test Lead, Test Manager
	  5.2. Test Planning- Test Plan as per IEEE 829 STANDARD TEST PLAN TEMPLATE
	  5.3. Test Process Monitoring & Control
	    5.3.1. Test Monitoring through -Test Log (IEEE 829: TEST LOG TEMPLATE to be discussed) and Defect Density
	    5.3.2. Reporting Test Status (IEEE 829: TEST SUMMARY REPORT TEMPLATE to be discussed)
	    5.3.3. Test Control
	  5.4. Requirement Traceability Matrix (Horizontal & Vertical), Test Scenario, Test Suite, Test Cases (both Positive & Negative Test Cases, as per IEEE 829:
		25	10

	TEST CASE SPECIFICATION TEMPLATE)		
	5.5. Configuration Management- Configuration Management support for Testing		
	5.6. Risk and Testing- Project Risk & Product Risk		
	5.7. Incident/ Defect Management		
	5.7.1. Defect Life Cycle		
	5.7.2. Defect/ Incident Report (IEEE 829: TEST INCIDENT REPORT TEMPLATE to be discussed)		
	Case Study on Test Plan for applications and Case study on Test Cases for different features within applications		
	Extra Reading: Version Control Tool: SVN, Defect Tracking Tool: Bugzilla, JIRA		
6	6. Tool Support for Testing	15	9
	6.1. Types of Test tools –CAST (only type & their purpose should be covered)		
	6.2. Effective Use of Tools: Potential Benefits and Risks		
	6.3. Introduction of a tool into an organization		
	6.4. Testing tools		
	6.4.1. Selenium -WebDriver and Test NG		
	6.4.2. Appium		
	6.4.3. JMeter		
	Extra Reading: Functional Test Automation Tools: Quick Test Professional (QTP), IBM Rational Robot, Non-functional Test Automation Tools: Load Runner, Test Management Tools: Test Director, Test Link, Bugzilla, Redmine, API Testing Tool: Postman, ETL Testing Tool, Big Data Testing Tool, AI based Testing Tool: Test Craft, UI Testing, Website Testing: TestRail		
	Total:	**100**	**45**

List of Practicals (if any)

Practicals based on Selenium

1. Focusses on how to invoke the Firefox browser, maximizing the window, navigate commands, etc.

Scenario:

    1.1. Open the Firefox browser.

    1.2. Maximize the browser window.

    1.3. Navigate to a particular URL (let say, SPPU website) "http://www.unipune.ac.in/".

1.4. Write a method to print PASS if the title of the page matches with the page title else FAIL. (If you are familiar with TestNG or JUnit use assert statement like assert.assertequals(actual, expected) to give a verdict of the pass or fail status.

1.5. Navigate to another URL (let say, the Facebook page) "https://www.facebook.com"

1.6. Navigate back to the QA Tech Hub website.

1.7. Print the URL of the current page.

1.8. Navigate forward.

1.9. Reload the page.

1.10.   Close the Browser.

2. Focusses on interacting with form elements like textbox, buttons, radio buttons and drop-down (Facebook Signup)
Scenario:

2.1. Open a browser.

2.2. Navigate to "http://www.fb.com"

2.3. Verify that the page is redirected to "http://www.facebook.com", by getting the current URL. (use if-else condition to verify this condition or use Assert.assertequals() in case you are familiar with TestNG or JUnit)

2.4. Verify that there is a "Create an account" section on the page.

2.5. Fill in the text boxes: First Name, Surname, Mobile Number or email address, "Re-enter mobile number", new password.

2.6. Update the date of birth in the drop-down.

2.7. Select gender.

2.8. Click on "Create an account".

2.9. Verify that the account is created successfully.

3. Focusses on working with links and getAttribute() method.
Scenario:

3.1. Open a Browser (write the generic code such that by changing the parameter browser can be changed.)

3.2. Navigate to https://flipkart.com website.

3.3. Write a method to find the count (number of) links on the homepage of Flipkart.

3.4. Write another method to print link text and URLs of all the links on the page of Flipkart.

4. Focusses on Frame Handling, mouse over operations (Login to an application)
Scenario:

4.1. Open any browser of your choice, for example, Chrome Browser.

4.2. Navigate to Snapdeal site (http://www.snapdeal.com)

4.3. Move to Sign in Button and hold

4.4. Move to the Sign In button and click.

4.5. Enter valid Email Id and click continue.

4.6. Enter the valid password and click LOGIN.

4.7. Verify that the user is logged in successfully.

5. Focusses on writing dynamic xpath (Login to Gmail Account and sending a mail from Gmail)

Scenario:

5.1. Open any browser of your choice, say Mozilla Firefox

5.2. Navigate to https://www.gmail.com

5.3. Enter a valid Email Id or Phone Number

5.4. Click Next button

5.5. Enter Password and click "Sign in" button.

5.6. Verify that Gmail is logged in successfully.

5.7. Click compose button and verify that a new mail window is opened.

5.8. Enter an Email Id

5.9. Enter some subject, say "Test Mail"

5.10. Enter some text in body

5.11. Click send button.

Course References:

Recommended Books:

Text Books:

1. Foundations of Software Testing by Rex black, Erik Van Veenendaal, Dorothy Graham (2012)-Cengage Learning: London UK, 3rd Edition
2. Software Engineering by Sommerville-Pearson,8thEdition
3. Daniel Galin, "Software Quality Assurance: From Theory to Implementation", Pearson Addison-Wesley, 2012. 2.
4. Effective Methods for Software Testing by William Perry- Wiley Pub, 3rd Edition.

Reference Books:

1. Roger S. Pressman, "Software Engineering-A Practitioner's Approach", McGraw Hill pub.2010
2. Software Testing in Real World Edward Kit- Pearson Pub
3. Software Testing Techniques by Boris Beizer-DreamTech Pub,2nd Edition
4. Software Testing by Ron Patton, TechMedia Pub.
5. Introducing Software by Testing Louise Tamres
6. Fundamentals of Software Engineering –Rajib Mall, 3rd Edition
7. Allen Gilles "Software quality: Theory and management", International Thomson, Computer press 1997.
8. Software Testing Principles Techniques and Tools by Milind. G. Limaye- Tata McGraw Hill Pub.
9. Stephen H. Kan, "Metrics and models in software quality Engineering", Addison –Wesley 2003.

Web Reference:

1. www.istqb.org
2. https://www.seleniumhq.org/
3. https://www.softwaretestingmaterial.com/selenium-tutorial/
4. https://www.toolsqa.com/selenium-tutorial/
5. www.guru99.com/software-testing.html
6. www.guru99.com/selenium-tutorial.html
7. www.guru99.com/mobile-testing.html
8. https://www.softwaretestinghelp.com/appium-tutorial-for-beginners/
9. www.professionalqa.com
10. www.resources.sei.cmu.edu/library
11. www.iist.org

Course Code: IT-34
Course Name: Knowledge Representation and Artificial Intelligence: ML, DL

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	25	--	--	50	75

Course Description:

Course Objectives:

Course Outcomes:

Student will be able to

CO1: Understand basic building block of Artificial Intelligence and Knowledge Representation.
(Understand)
CO2: Apply Propositional Logic for knowledge representation. (Apply)
CO3: Design various models based on Machine Learning methodology (Apply)
CO4: Design various models based on Deep Learning methodology (Apply)
CO5: Understand various hardware and software aspect used for AI and its application.
(Understand)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions

1	1. Artificial Intelligence and Knowledge representation
	   1.1. Introduction to Artificial Intelligence and its evolution.
	   1.2. What is Intelligence and Artificial Intelligence
	   1.3. How AI is affecting on real life?
	   1.4. Different branches of AI
	   1.5. Limitations of AI
	   1.6. Need of knowledge Representation
	   1.7. Knowledge Representation and Mapping schemes
	   1.8. Properties of good knowledge-based system
	   1.9. Types of knowledge
	   1.10. Knowledge Representation issues
	   1.11. AND-OR Graph
	   1.12. The Wumpus World
		15	3

2	2. Propositional Logic
	    2.1. Mathematical Logic and Inference
	    2.2. First Order Logic: Syntax and Semantic, Inference in FOL
	    2.3. Forward chaining, backward Chaining
	    2.4. Language
	    2.5. Semantics and Reasoning
	    2.6. Syntax and Truth Values,
	    2.7. Valid Arguments and Proof Systems
	    2.8. Rules of Inference and Natural Deduction
	    2.9. Axiomatic Systems and Hilbert Style Proofs
	    2.10. The Tableau Method
	    2.11. The Resolution Refutation Method
	
	Problems based on FOPL
		15	8

3	3. Machine Learning
	    3.1. History of Machine Learning
	    3.2. Machine Learning Vs Statistical Learning
	    3.3. 3Type of Machine Learning - Supervised, Unsupervised Learning, Reinforcement Learning
	        3.3.1. Linear Regression
	        3.3.2. Logistic Regression
	        3.3.3. Support Vector Machines
	        3.3.4. Random Forest
	        3.3.5. Naïve Bayes Classification
	        3.3.6. Ordinary Least Square Regression
	        3.3.7. K-means
	    3.4. Essentials of Data and its analysis
	    3.5. Framework of Data Analysis
	
	Extra Reading: Forms of Learning, Inductive Learning, Ensemble Methods, Apriori Algorithm, Principal Component Analysis, Singular Value Decomposition, Reinforcement or Semi-Supervised Machine Learning, Independent Component Analysis
		30	15

4	4. Deep Learning
	    4.1. Fundamentals of Deep networks and Defining Deep learning
	    4.2. Deep learning Problem types
	        4.2.1. ANN
	        4.2.2. CNN
	        4.2.3. RNN
	        4.2.4. GAN
	        4.2.5. NLP
	    4.3. Building blocks of Deep learning
	    4.4. Classification and Detection
		30	15

	Algorithms should be taught using Python Library – Pytorch **Extra Reading:** DNN, Transfer Learning, Architectural Principals of Deep networks – AlexNet, VGG 16, Inception, MobileNet			

5	5. Hardware and Software for AI
	   5.1. Data Center
	   5.2. Gateway edge computing
	   5.3. Keyprocessor for AI
	   5.4. CPU and GPU
	   5.5. Field Programmable Gate Array (FPGA)
		5	2

6	6. Application of AI
	   6.1. Robotics Process Automation – Chatbot
	   6.2. NLP
	   6.3. Image Processing
	   6.4. Speech Recognition
		5	2

	Total:	**100**	**45**

Course References:

Recommended Books:

Reference Books:

1. Artificial Intelligence, 3rd Edition, Elaine Rich, Kevin Knight, S.B. Nair - Tata McGraw Hill.
2. Artificial Intelligence: A Modern Approach Textbook by Peter Norvig and Stuart J. Russell
3. Artificial Intelligence by Patrick Henry Winston - Addison-Wesley, Third Edition.
4. Artificial Intelligence and Intelligent Systems by N.P.Padhy - Oxford University Press.
5. Data Mining practical Machine Learning Tools and Techniques by Ian H. Witten Eibe Frank Mark Hall - Elsevier publication
6. Python Machine Learning and Deep Learning with Python Scikit-learn, and TensorFlow 2, 3rd Edition by Sebastian Raschka, Vahid Mirjalil
7. Machine Learning by Tom M Mitchell – TMGH Publication
8. Machine Learning using Python by Manaranjan Pradhan and U. Dinesh Kumar – WILEY Publication
9. Machine Learning for Big Data – Hands on for Developers and Technical Professionals by Jason Bell – WILEY Publication

Course Code: IT-35
Course Name: Cloud Computing

Credit Scheme			Evaluation Scheme				
Lecture	**Practical**	**Credit**	**Internal**			External	Total
			Written	**Practical**	**Tutorial**		
3 Hrs./Week	-	3	10	10	5	50	75

Course Description:

Course Objectives:

1. To introduce the fundamentals of cloud computing, its technologies, Challenges and Applications
2. To give Insights into the virtualization technologies and Architecture
3. To know the relationship between Cloud and SOA
4. To classify and evaluate Cloud Security Issues
5. To apply theory to practical knowledge through case Studies

Course Outcomes:

Student will be able to

CO1: Describe the concepts of Cloud Computing and its Service Models& Deployment Models.
    (Understand)
CO2: Classify the types of Virtualization. (Understand)
CO3: Describe the Cloud Management and relate Cloud to SOA. (Understand)
CO4: Interpret Architecture and Pharrell Programing of Cloud Computing. (Apply)
CO5: Demonstrate practical implementation of Cloud computing. (Apply)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions
1	1. Cloud Services and Cloud Models 　1.1. Introduction to Cloud 　1.2. Cloud Computing vs. Cluster Computing vs. Grid Computing 　1.3. Introduction to Cloud Service Models 　1.4. Characteristics, Advantages, Security 　1.5. XAAS- Anything as a Service – Storage as a service, Network as a Service, Database as a Service etc. 　1.6. IAAS, PAAS, SAAS characteristics, benefits and Applications 　1.7. Comparison of SAAS, PASS and IAAS 　1.8. Cloud Deployment Models-Public, Private, Hybrid	20	7

	1.9. Cloud Platforms :
	    1.9.1. Google Cloud Platform,
	    1.9.2. Microsoft Azure
	    1.9.3. SalesForce,
	    1.9.4. AWS.
	
	Extra Reading: Offerings of AWS		

2	2. Virtualization
	  2.1. Introduction to Virtualization concept &Hypervisors
	  2.2. Types of Virtualization: Server, Storage and Network
	  2.3. Pros and Cons of Virtualization
	  2.4. Machine Image, Virtual Machine (VM)
	  2.5. Technology Examples
	    2.5.1. Xen: Para virtualization
	    2.5.2. VMware: Full Virtualization
	    2.5.3. Open Source Virtualization Manager
		15	8

3	3. SOA & Cloud Management
	  3.1. Definition of Service Oriented Architecture
	  3.2. Basic concepts of SOA
	  3.3. Web Services: SOAP and REST
	  3.4. Cloud APIs (RESTful)
	  3.5. Relating SOA and Cloud Computing.
	  3.6. Cloud Availability
	  3.7. Cloud Governance
	  3.8. Service Level Agreement
	
	Extra Reading: Pricing Model: Usage Reporting, billing and metering (AWS), Cloud Statistics
		15	8

4	4. Multi Core Architecture
	  4.1. Cloud Computing Architecture
	  4.2. Multi Core Architecture
	  4.3. Multi Cloud Environment
	  4.4. Parallel Programming
	  4.5. Parallel Processing
	  4.6. Edge Computing Concepts
		15	6

5	5. Moving Applications to the Cloud
	  5.1. Cloud Migration Strategies and Process
	  5.2. Issues in Inter Cloud
	  5.3. Applications in the Clouds
	  5.4. Cloud Service Attributes
	  5.5. Cloud Bursting.
	  5.6. Data Migration in Cloud
	  5.7. 5Quality of Services in cloud Computing
	
	Extra Reading: Six R for Cloud Migration
		15	6

6	6. Cloud Security & Implementation of Cloud	20	10
	6.1. Cloud Security Fundamentals		
	6.2. Cloud Security Architecture		
	6.3. Cloud Computing Security Challenges		
	6.4. Privacy and Security in Cloud		
	6.5. Identity Management and Access control		
	6.6. Demonstrate the commercial cloud computing Infrastructures		
	6.7. Introduction to Dockers Container		
	6.8. Case Study's based on Cloud Computing Concepts.		
	Total:	**100**	**45**

List of Practicals (if any)

1. Create an Account to Cloud Service Provider (AWS, AZURE, Google Cloud, etc.)
2. Create an Instance on Cloud
3. Provide Access Control and Permission to Users
4. Execute the Web Page on Cloud
5. Provide Security Mechanism to your instance.

Course References:

Recommended Books:

Reference Books:

1. Cloud Computing Bible by Barrie Sosinsky, Wiley India Pvt. Ltd,
2. Cloud Computing : Automating the Virtualized Data Center
3. Cloud Computing by Dr. Kumar Saurabh ,Wiley–India
4. Cloud computing: A practical approach by Anthony T. Velte, Tata McGraw-Hill
5. Cloud Computing Concepts, Technology & Architecture by Thomas Erl, Zaigham Mahmood, and Ricardo Puttin
6. Mastering Cloud Computing by Rajkumar Buyya, Christian Vecchiola, S.Thamarai Selvi - McGraw Hill Education (India) Private Limited,
7. Cloud Computing Web –Based Applications that change the way you work and Collaborate Online by Michael Miller, Pearson
8. Cloud Computing for Dummies by Judith Hurwitz, Robin Bloor, Marcia Kaufman, FernHalper

Web Reference:

1. http://www.cloudcomputingpatterns.org/
2. http://whatiscloud.com
3. www.w3schools.com

Course Code: IT-31L
Course Name: Practicals

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

This Practical course contains 2 sections. –

1. List of Practicals – Mobile Application Development
2. List of Practicals – KR an AI, ML, DL

Course Outcomes:
Student will be able to

CO1: Develop mobile application. (Apply)
CO2: Develop ML, DL models using Python (Apply)

Course Structure:

Suggestive List of Practicals

Mobile Application Development

1. Demonstrate different Layouts with different views in android Layouts- ConstraintLayout, RelativeLayout, TableLayout Views- Button, TextView, EditText, WebView, CheckBox, RadioButton, ToggleButton, ImageButton, RatingBar, ProgressBar, SeekBar, VideoView, DatePicker, CalendarView, Spinner
2. Write an android code to make phone call using Intent
3. Write an android code to turn ON/OFF Bluetooth
4. Write an android code to turn ON /OFF the Wi-Fi
5. Design android application for login activity. Write android code to check login credentials with username = "mca" and password = "android". Display appropriate toast message to the user.
6. Create a fragment that has its own UI and enable your activities to communicate with fragments.
7. Demonstrate Array Adapter using List View to display list of fruits.
8. Write an application to demonstrate Alert Dialog Box in android
9. Demonstrate Options Menu, Context Menu and Popup Menu in android
10. Write an application to produce Notification

11. Write an android application using SQLite to create table and perform CRUD operations (Example. COURSE table (ID, Name, Duration, Description), perform ADD, UPDATE, DELETE and READ operations)
12. Create an Android app, powered by Firebase Realtime database that supports: Adding Data to Firebase Realtime database, Retrieving Data from Firebase and Deleting data from firebase data.
13. Demonstrate WebView to display the web pages in an android application.
14. Write an android app to write JSON data into a file and read JSON data from created file.
15. Write an application to display a PDF as an image in React app using URL
16. Develop simple flutter application to open a browser using Android SDK

KR an AI, ML, DL

1. Find the correlation matrix.
2. Plot the correlation plot on dataset and visualize giving an overview of relationships among data on iris data.
3. Analysis of covariance: variance (ANOVA), if data have categorical variables on iris data.
4. Apply linear regression Model techniques to predict the data on any dataset.
5. Apply logical regression Model techniques to predict the data on any dataset.
6. Clustering algorithms for unsupervised classification.
7. Association algorithms for supervised classification on any dataset
8. Developing and implementing Decision Tree model on the dataset
9. Bayesian classification on any dataset.
10. SVM classification on any dataset
11. Text Mining algorithms on unstructured dataset
12. Plot the cluster data using python visualizations.
13. Creating & Visualizing Neural Network for the given data. (Use python)
14. Recognize optical character using ANN.
15. Write a program to implement CNN
16. Write a program to implement RNN
17. Write a program to implement GAN
18. Web scraping experiments (by using tools)

Course Code: ITC31
Course Name: Mini Project

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
-	10 Hrs./Week	5	-	75	-	50	125

Course Description:

A mini project is an assignment that the student needs to complete at the end of every semester to strengthen the understanding of fundamentals through effective application of the subjects learnt.

Course Outcomes:

Student will be able to

CO1: Create working project using tools and techniques learnt in this semester (Create)

Course Structure:

Guidelines for Mini Project

1. Students are expected to undertake one mini project starting from first semester till third semester.
2. The student may take up the mini project in first semester based on the courses learnt in that semester and for every next semester the mini project may be based on the courses learnt in the current semester along with all the subjects learnt in earlier semesters.
3. The student may take up the project individually or in group. However, if project is done in group, each student must be given a responsibility for distinct modules.
4. Selected project/module must have relevant scope as per the marks assigned and must be carried out in the Institute.
5. Internal guide should monitor and evaluate the progress of the project on individual basis through handwritten workbook (Project Diary) maintained by students containing various project milestones with learnings and remarks from internal guide for concurrent evaluation.
6. The Project Synopsis should contain an Introduction to Project clearly stating the project scope in detail justifying enough scope for 125 marks. The project work will carry 75 marks for internal assessment and 50 marks for external assessment.
7. Students are expected to show working demo of the project during final evaluation.
8. **Students are expected to upload mini-project on GITHUB as project repository of the institution.**
9. Students are expected to submit the soft copy of mini project report as a part of final submission.
10. The project will be assessed internally as well as externally by the examiners appointed by University. University may appoint Industry Experts as an external examiner