

Master of Business Administration (MBA) – Fintech

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

MBA I effective from AY 2021-22

MBA II effective from AY 2022-3

1.0 The MBA Fintech Management programme is a specialized degree wherein the student shall be admitted to this programme wherein the specialization is defined right at the entry point to the programme. The student shall have choices only in the form of the elective courses.

1.1 Eligibility: As per Directorate of Technical Education, Maharashtra State rules.

1.2 Programme Educational Objectives (PEOs):

1. **PEO1:** Graduates of the **MBA Fintech** 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 Fintech** 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 Fintech** 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 Fintech** 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 Fintech** 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.

1.3 Programme Outcomes (POs): At the end of the **MBA Fintech** 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.

1.4 Programme Specific Outcomes (PSOs):

PSO 1: Ability to demonstrate knowledge of key elements of the FinTech domain and prominent technologies such as API, Blockchain, Cloud Computing, AI, Machine Learning, RPA, IoT, and Big Data and apply them to real business scenarios and problems with a strategic, and practical approach

PSO 2: Ability to exhibit a broad appreciation of business issues within the context of Fintech and understand the technology evolution, regulatory dimensions and ethical aspects of Fintech

1.5 Graduate Attributes (GAs): At the end of the MBA (Fintech) 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

2.1 Course Types & Evaluation Pattern:

Sr.No.	Course Type	Credits	Nature	Comprehensive Concurrent Evaluation (CCE)	End Semester Evaluation (ESE) Marks	Total Marks
1	Generic Core (GC)	3	Compulsory	50	50	100
2	Subject Core (SC)	3	Compulsory	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	50	0	50
6	Summer Internship Project (SIP)	6	Project (Compulsory)	50	50	100

Note: Massive Open Online Courses (MOOCs)¹: Upto 40% of the elective courses may be offered through Massive Open Online Courses (MOOCs) developed as per the pedagogy stated in the AICTE regulation (2016) or equivalent; following the four-quadrant approach and made available on the SWAYAM platform of Government of India.

¹ AICTE (Credit Framework for online learning course through SWAYAM) Regulations, 2016

2.2 Programme Structure: The Programme Structure is as depicted below

	Course#	Semester I		Semester II		Semester III		Semester IV		Credits	CCE Marks	ESE Marks
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	1050
	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	550
	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	0
	12	GE IL - 3	12	SE IL -2	11	SE IL -5					550	
										110		
12		12		11		8		43		Credits	1600 CCE	1600 ESE

LEGEND:

#	Bloc k	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 (3 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	

Note:

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

3.0 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.

4.0 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

4.1 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 Taxonomy
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.

4.2 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.

4.3 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.**

5.0 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	

6.0 Programme Flexibility:

6.1 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 (Fintech) 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.

6.2 Dropping an Elective Course:

1. Students who opt for an elective course and fail to earn the credits for the elective course (generic / subject) are permitted to opt for another elective course (generic / subject) 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 (Sustainability) programme .

6.3 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 (Fintech) programme 's PEOs and POs and are opted by the students during the period of his enrolment for the MBA (Fintech) 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.

6.4 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 (Fintech) programme 's PEOs and POs** and are opted by the students **during the period of his enrolment for the MBA (Fintech) 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.

6.5 Credit Transfer for MOOCs:

1. Learners are encouraged to opt for MOOCs (Massive Online Open Courses) through **SWAYAM, NPTEL, EdX, Coursera, Udemy**, etc.
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 40% of the total credits (44 Credits) shall be earned through the MOOCs.
4. 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.
5. 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.
6. 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.
7. Evaluation of MOOCs through SWAYAM:
 - 7.1 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).
 - 7.2 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.
 - 7.3 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.
 - 7.4 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.

- 7.5 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.
8. Evaluation of MOOCs through EdX, Coursera, UdeMy:
- 8.1 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.
- 8.2 Alternatively, the institute may carry out a concurrent comprehensive evaluation of such students who undertake MOOCs through the EdX, Coursera, UdeMy platform.

6.6 Professional Certification Programmes:

1. Learners may opt for Professional Certification Programmes offered by National, International organizations, Apex bodies, Chambers of Commerce, Professional certifying bodies, E-learning companies of repute.
2. Not more than 40% of the total credits (44 Credits) shall be earned through the Professional Certification Programmes.
3. 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.
4. 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.
5. 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.

6.7 Start-up: Launching and Sustaining' program²: 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.

² As per AICTE Policy approved by the Executive Committee in its 100th meeting held on June 28, 2016

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.

7.0 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.

7.1 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

7.2 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.

7.3 Degree Requirements: The degree requirements for the MBA (Fintech) programme are completion of minimum 110 credits.

7.6 Grade Improvement:

1. A Candidate who has secured any grade other than F (i.e. passed the MBA (Fintech) 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.

8. Miscellaneous

8.1 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.

8.2 Medium of Instruction: The medium of Instruction & Evaluation shall be English.

- 8.3** Numbers indicated against each unit indicate L+T. These are indicative in nature. Course teachers may modify based on teaching & assessment, evaluation methods adopted.
- 8.4** Text Books and Reference Books refer to latest edition.
- 9. Detailed syllabus of each course is provided in Annexure I.**

ANNEXURE
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 Dhmiya, 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
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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 <ul style="list-style-type: none"> • 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 Company.
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 & Aguin, 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.

- Supply Chain Management - Strategy, Planning & Operation, Sunil Chopra, Peter Meindl, D. V. Kalra, Pearson Education.

Suggested Reference Books:

- Supply Chain Logistics Management, Donald Bowersox, David Closs, M Bixby Cooper, Tata McGraw Hill.
- Operations Management, William J. Stevenson, TMGH.
- Operations Management, Lee Krajewski, Larry Ritzman, Manoj Malhotra, Pearson Education.
- 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 Wehrich, 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 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 Puri 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, Cannon 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
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2 Credits	LTP: 2:0:0	Generic Elective – University Level
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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 successfully 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	IDENTIFY 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 by John 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):** Definition 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, Addison 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. Disruptive 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, McMurphy & 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 Isenhardt, 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
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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.

- 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.
- 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.
- Detailed study of atleast **FIVE** Systems and underlying Procedures, such as: (list is illustrative only)
 - Attendance Recording System in a manufacturing / service organization.
 - Employee scheduling in a retail mall.
 - Facilities management and scheduling system in automobile workshop.
 - Inventory Management
 - Just in Time Inventory System in a manufacturing / service organization.
 - Kitchen Order Ticket (KOT) System in a Restaurant.
 - KYC verification system in a mutual fund house.
 - Loan approval system in a cooperative bank.
 - Maintenance system in a facility.
 - On-boarding of new employees in a manufacturing / service organization.
 - Payroll Management
 - Performance Appraisal system in a manufacturing / service organization.
 - Point of sale (POS) system in an organized retail store.
 - Purchase Order System in a manufacturing / service organization.
 - Quality Audit system
 - Receivables Management
 - Stock Taking system in a library.
 - Warehouse management system.
- Presentation of individual/group projects

Suggested Text Book:

- 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, Addison 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.

- Students shall carry out an indepth study of any TWO industries of their choice.
- Industries selected should be distinct from each other.
- Students shall submit a structured detailed report.

Suggested Text Books:

- No text books are prescribed.
- 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:

- Business Model Designing
- Business Plan Designing
- Financial Planning
- Prototype Making
- Test Marketing
- Planning Commercial Launch.

Suggested Text Books:

- New Venture Management: The Entrepreneur's Roadmap (Entrepreneurship Series), Donald F. Kuratko and Jeffrey S. Hornsby, Pearson
- The Manual for Indian Start-ups: Tools to Start and Scale-up Your New Venture, Vijaya Kumar Ivaturi, Meena Ganesh, Penguin Random House India.
- Managing New Ventures, Anjan Raichoudhuri, Prentice-Hall of India Pvt.Ltd
- Develop Your Idea!: Get Off to a Flying Start With Your Startup. Guided Exercises, Templates & Resources for Exploring New Business Ventures, K. N. Kukoyi
- Managing Small Business by Longenecker, Moore, Petty and Palich, Cengage Learning, India Edition.
- Entrepreneurship: New Venture Creation by David H. Holt
- 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 data, 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

Subject Core (SC)/Subject Elective (SE) Courses - Semester II
Specialization: FINTECH

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

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

CO# COGNITIVE	ABILITIES	COURSE OUTCOMES
CO205FINTECH.1	REMEMBERING	RECALL the structure and components of Indian financial system through banking operations & Financial Markets.
CO205FINTECH.2	UNDERSTANDING	UNDERSTAND the concepts of financial markets, their working and importance.
CO205FINTECH.3	APPLYING	ILLUSTRATE the working and contribution of Banks and NBFCs to the Indian Economy.
CO205FINTECH.4	ANALYSING	ANALYZE the linkages in the Financial Markets.
CO205FINTECH.5	EVALUATING	EXPLAIN the various banking and accounting transactions.
CO205FINTECH.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		SC 206 FINTECH - Basic R Programming in Fintech Management
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO206FINTECH.1	REMEMBERING	DESCRIBE the basic concepts of R Programming in Fintech Management, Business Analytics, DATA Science and Business Intelligence.
CO206FINTECH.2	UNDERSTANDING	EXPLAIN the applications of R Programming in Fintech Management and Business Analytics in multiple business domains and scenarios.
CO206FINTECH.3	APPLYING	DEVELOP a thought process to think like a data scientist/business analyst in fintech operations.
CO206FINTECH.4	ANALYSING	ANALYZE data graphically by creating a variety of plots using the appropriate visualization tools of R.
CO206FINTECH.5	EVALUATING	SELECT the right functions of R for the given analytics task using Big Data, artificial intelligence, and machine learning to evaluate investment opportunities, optimize portfolios, and mitigate risks.
CO206FINTECH.6	CREATING	COMBINE various tools and functions of R programming language and use them in live analytical projects in multiple business domains and scenarios.

- 6. Introduction and Basics:** Introduction to Fintech management, Definition of Fintech management, Basics of R Programming, need of R Programming in Fintech operations, and Definition of analytics, Evolution of analytics, Need of Analytics in Fintech management, Importance of data in Fintech Management and 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. Types of Analytics, Tools for Analytics. Concept of insights. **(5+1)**
- 7. Analytical decision-making:** Analytical decision-making process, characteristics of the analytical decision-making process in Fintech Management. Breaking down a business problem into key questions that can be answered through analytics, Characteristics of good questions, Skills of a good business analyst using Big Data, artificial intelligence, and machine learning to evaluate investment opportunities, optimize portfolios, and mitigate risks in Fintech management. Overview of R Programming in Fintech and 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)**
- 8. 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, Loading internal dataset, Exploration and transformation activities, basics of Web Scraping, Handling packages in R, working with directory. **(6+1)**
- 9. 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, Data types in R Loading and handling data in R, Exploring data in R, Built-in functions in R like: seq(), cbind (), rbind(), merge(), knowledge on the various subsetting methods, summarize data by using functions like: str(), summary(), names(), edit(), 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, Descriptive statistics- Data range, Frequencies and mode, mean and median, standard deviation. **(10+3)**
- 10. Data Visualization:** Concept of Data Visualization, Popular Data Visualization tools, Exploratory Data Analysis(EDA) and spotting problems in data and visualization, 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:

4. Data Analytics using R, Seema Acharya, TMGH
5. Data mining and business analytics with R, Johannes Ledolter. New Jersey: John Wiley & Sons.
6. Data Mining for Business Intelligence, Concepts, Techniques and Applications, Shmueli, Patel, and Bruce: Wiley
7. Statistical Analysis in Simple Steps Using R, Kiran Pandya, Prashant Joshi and Smruti Bulsari, Sage Publications India Pvt. Ltd.
8. R for Business Analytics, A Ohri

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		217 - FINTECH: Introduction to Fintech
2 Credits	LTP: 2:1:1	Subject Elective (SE-IL) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO217FINTECH.1	REMEMBERING	Remember various concepts such as Crowd funding, Cryptocurrency, block chain and machine learning.
CO217FINTECH.2	UNDERSTANDING	Understand the concept of Cryptocurrency and blockchain and its application in finance sector
CO217FINTECH.3	DESCRIBE	Describe alternative finances Crypto currencies, block chain and the technologies supporting these
CO217FINTECH.4	APPLY	Apply technology to various components & processes of financial services
CO217FINTECH.5	EVALUATING	Evaluate the impact of Fintech solutions on business sectors and customers.

1. Introduction to FinTech : Concept, meaning, Significance, Goals of Fintech, key areas in FinTech, Role of FinTech in economic development, Opportunities and Challenges of Fintech, Fintech Evolution in different sectors of the industry-. Banks, Startups and Emerging Markets, Recent developments in FinTech. Future prospects and potential issues with Fintech, FinTech as an aid to customer satisfaction. (5+1)

2. Technology, Payments, Cryptocurrencies and Blockchain: Understand the concept of Crypto currency, block chain, Artificial Intelligence, machine learning. Fintech users, Individual Payments, RTGS Systems, Immediate Payment Service (IMPS), Unified Payments Interface (UPI). Legal and Regulatory Implications of Crypto currencies, Payment systems and their regulations (5+1)

3. Digital Finance and Alternative Finance: A Brief History of Financial Innovation, Digitization of Financial Services, Crowd funding, Charity and Equity, P2P and Marketplace Lending, New Models and New Products in market place lending. Introduction to the concept of Initial Coin Offering. **Industry Showcase:** How AI is transforming the Future of FinTech. (5+1)

4. FinTech Regulation and RegTech: FinTech Regulations: Global Regulations and Domestic Regulations, Evolution of RegTech, RegTech Ecosystem: Financial Institutions, RegTech Ecosystem: Startups RegTech, Startups: Challenges, RegTech Ecosystem: Regulators, Use of AI in regulation and Fraud detection. (5+1)

5. Data & TechFin: History of Data Regulation, Data in Financial Services, Fintech in Banks and Insurance companies, Digital Identity, Change in mindset: Regulation KYC to KYD, AI & Governance, New Challenges of AI and Machine Learning, Machine Learning and Applications

***Case studies and group research projects are expected to be organized for students. (5+1)**

Suggested Text Books

1. Ethereum: Blockchains, Digital Assets, Smart Contracts, Decentralized Autonomous Organizations
by Henning Diedrich, CreateSpace Independent Publishing Platform, ISBN-13: 978-1523930470.
2. Blockchain Applications: A Hands-on Approach.

by Arshdeep Bahga and Vijay Madisetti, Vpt, ISBN-13: 978-0996025560.

3. Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction

by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder, Princeton University Press, ISBN-13: 978-0691171692.

4. An Introduction to Statistical Learning: with Applications in R (Springer Texts in Statistics)

by Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, Springer, ISBN-13: 978-1461471370.

Suggested Reference Books

1. Fintech for Beginners, Author Swanson Seth, Publisher: Createspace Independent Publishing Platform ISBN : 9781539919315,9781539919315 Edition 1

2. Fintech Bigtech And Banks Digitalization and Its Impact On Banking Business Models (Hb 2019) Author: Tanda , Publisher- SPRINGER, ISBN 9783030224257

Suggested Swayam Course

<https://www.my-mooc.com/en/mooc/introduction-to-fintech/>

<https://www.edx.org/course/introduction-to-fintech>

<https://ocw.mit.edu/courses/sloan-school-of-management/15-s08-fintech-shaping-the-financial-world-spring-2020/syllabus/>

Semester II		218 FINTECH- Fundamental & Technical Analysis
2 Credits	LTP: 0:3:1	Subject Elective (SE - IL) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO218FINTECH .1	REMEMBERING	REMEMBER the key concepts in Fundamental & Technical Analysis.
CO218FINTECH .2	UNDERSTANDING	EXPLAIN various parameters, charts and theories of Fundamental & Technical Analysis and Investment psychology
CO218FINTECH .3	APPLYING	MAKE PRACTICAL USE of Financial Statement Analysis, Various Ratios, Theories and Charts of Fundamental & Technical Analysis.
CO218FINTECH .4	ANALYSING	ANALYSE AND FORECAST expected Market Price of securities in order to take and execute Investment Decisions.
CO218FINTECH .5	EVALUATING	FORMULATE an Ideal Portfolio of Investment using Fundamental & Technical Analysis.
CO218FINTECH .6	CREATING	CREATING filters for identifying prospective scrips using ICTs.

- 1. Introduction to Fundamental Analysis:** Meaning- Definition-Types of Fundamental Analysis – Role of Fundamental Analysis – Basic Concepts- Time Value- Inflation – Interest rates- Opportunity Cost- Risk & Return – Equity Risk Premium- Beta – Risk adjusted Return – Different Analysis – Economic Analysis- Industry Analysis- Company Analysis-Qualitative & Quantitative (4+1)
- 2. Understanding Financial Statements:** Director’s Report- Auditor’s Report- Financial Statements- Income Statement – Balance Sheet – Schedule and Notes to Balance Sheet – Cash Flow Statement-Comparative and Common Size Statements –Financial Ratios – Du-Pont Analysis – Important Points while looking at Financials – Peer Comparison – Management analysis- Corporate Governance (6+1)
- 3. Valuation Methodologies:** Difference between Value and Price – Why Valuation – Top –Down Valuation (Economy- Industry – Company) – Asset Based Valuation – Earning Based Valuation - Discounted Cash Flow Model – Dividend Discount Model – Free Cash Flow (FCFF) Model – Price/ Earnings Ratio – Price / Book Value Ratio – Enterprise Value – Price / Sales ratio – Relative Valuation – Capital Asset Pricing Model (CAPM) – Some Important Considerations in Valuation (5+1)
- 4. Introduction to Technical Analysis** – Definition and Concept - Price Discount and Price Movements - Assumptions in Technical Analysis – Strength and Weakness of Technical Analysis – Trading Strategies – Dow Theory - Trading Psychology and Risk Management- (4+1)
- 5. Company Analysis Using Technical Analysis** – Understanding of Various Charts – Bullish trend – Bearish Trend – Price Chart – Line Chart – Bar Chart – Candle Chart – Point and Figure Chart – Candle Stick Pattern - -One Candle Pattern – Two candle Pattern – Three Candle Pattern – Pattern study with examples – Support – resistance – Head & Shoulders – Double Top & Double Bottom – Gap Theory – Major Indicators & Oscillators -. (6+1)

Suggested Text Books

Securities Analysis (Benjamin Graham, David L Dodd, McGraw Hill Education, 6th edition)
Investment Analysis And Portfolio Management (Prasanna Chandra, McGraw Hill Education, Fifth Edition)
Fundamental Analysis For Dummies (Matt Krantz, For Dummies, 2nd Edition)
Investment Management (V.K.Bhalla, S.Chand, 19th Revised Edition)
NSE Work Book- (NSE Academy)
Technical Analysis of Financial Market: A comprehensive guide to trading methods & applications (John J. Murphy, New York Institute of Finance, Penguin Group, First Edition)
Technical Analysis Explained: The successful Investor’s Guide to Spotting (Martin J. Pring, McGraw Hill Education, Fifth Edition)

Suggested Reference Books

The Intelligent Investor (Benjamin Graham, Harper Business 2011th Edition)

Investments (ZVI Bodie, Alex Kane, Alan J Marcus, Pitab Mohanty, Tata McGraw Hill , 6th Edition)
 Technical Analysis of Stock Trend (Robert D, Edwards, John Magee, W.H.C. Bassetti, Snowball Publishing, 8th edition)

Suggested Journals

BSE
 NSE
 Dalal Street
 Capital Market

Semester II		219 FINTECH – Business Valuation
2 Credits	LTP: 2:0:0	Subject Elective (SE-IL) Course- Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO219FINTECH.1	REMEMBERING	RECALL concepts of value and valuation
CO219FINTECH.2	UNDERSTANDING	EXPLAIN valuation process of business firms
CO219FINTECH.3	APPLYING	CALCULATE business value using different techniques regulatory aspects
CO219FINTECH.4	ANALYSING	EXAMINE special factors to be considered in business valuation
CO219FINTECH.5	EVALUATING	ASSESS the value of the firm in the light of business environment and

- 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, Taxman
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 II		220 FINTECH- Budgetary Control and Variance Analysis Using Spreadsheets
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2 Credits	LTP: 1:0:1	Subject Elective (SE-IL) Course – Fintech Management
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Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO220FINTECH .1	REMEMBERING	REMEMBER the key concepts in Budgeting and Variance Analysis
CO220FINTECH .2	UNDERSTANDING	UNDERSTAND the applications and use of MS Excel and Google Sheet.
CO220FINTECH .3	APPLYING	DEVELOP, APPLY and actually use core functionality of MS Excel in decision framework to solve managerial problems
CO220FINTECH .4	ANALYSING	ANALYSE different situations by identifying the problems areas
CO220FINTECH .5	EVALUATING	FORMULATE an idea and acceptable solutions to solve different problems in the area of financial management

- 1. Budget and Budgetary Control:** Meaning, Objectives, and Importance of Budget and Budgetary Control, Process of Preparing Budgets, Different types of budgets – Production budget, Purchase Budget, Sales budget, Administrative Expenses budget, Cash Budget, Fixed & Flexible Budget, Operating Budget, Financial Budget, Master Budget, Zero Based Budgeting. (5+1)
- 2. Standard Costing and Variance Analysis:** Meaning, Importance, Advantages and Disadvantages, Cost Variance Analysis – Material Variances, Labour Variances and Overhead Variances. (5+1)
- 3. Basic Excel and Google Sheets:** Overview of MS Excel, Advanced Modeling Techniques, Table formula and Scenario building, Lookups: V- Lookup Match & offset, pivot tables, Understanding and Overview of Google Sheets and Working with Functions (5+1)
- 4. Operating Budget and Financial Models:** Assumptions, Sales and Collections, Cost of Goods Sold, Inventory and Purchases, Operating Expenses, Income Statement, Identify and communicate drivers of variances, create proposal budget and make presentable. (5+1)
- 5. Financial Budget and Financial Models:** Capital Budget & Cash Budget, Balance Sheet in Excel, Identify and communicate drivers of variances, create proposal budget and make presentable. (5+1)

Suggested Text Books:

1. Management Accounting - Khan & Jain, Tata McGraw Hill
2. Cost Management – Kishor Ravi M., Taxmann
3. Business Data Analysis using Excel – David Whigham – Oxford University Press
4. Building Financial Models with Microsoft Excel - K. Scot Proctor, Wiley Finance
5. <https://www.benlcollins.com/spreadsheets/how-to-use-google-sheets/>
6. <https://edu.gcfglobal.org/en/googlespreadsheets/>

Suggested Reference Books:

1. Accounting for Management, S. N. Maheshwari
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

Suggested Audio Visuals link

https://www.youtube.com/watch?v=Rus4buFP_a4

Subject Core (SC)/Subject Elective (SE) Courses - Semester III
Specialization: FINTECH

Semester III		304 FINTECH- Global Financial Markets
3 Credits	LTP: 2:1:1	Subject Core (SE) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO304.1	REMEMBERING	Enumerate the key terms associated with International Finance.
CO304.2	UNDERSTANDING	Summarize the various the concepts related to regulators, financial markets, Financial Instruments, tax structures at international level.
CO304.3	APPLYING	Illustrate the role of international monetary systems & intermediaries in Global financial market.
CO304.4	ANALYSING	Inspect the various parameters of global financial market and interpret best possible international investment opportunities.
CO304.5	EVALUATING	Determine the various strategies to start investment or business at the international level by considering various factors of international finance.
CO304.6	Creating	Formulate the investment plan or business plan by adapting international finance environment.

1. 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)
2. 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)
3. 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 Bonds, Zero Coupon Bonds, Dual Currency Bonds, and Equity related Bonds. Procedure for Bonds Issues. (8+1)
4. 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)

5. 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. Srinivasan
5. International Finance by Maurice 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

Semester III		305 FINTECH : Financial Modeling with Excel
3 Credits	LTP: 1:1:2	Subject Core (SC) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO305.1	REMEMBERING	Remember the concepts, terminologies, frameworks, tools and techniques of Financial Modeling
CO305.2	UNDERSTANDING	UNDERSTAND the applications and use of MS Excel in financial Modeling and its different techniques
CO305.3	APPLYING	DEVELOP, APPLY and actually use core functionality of MS Excel in decision framework to solve managerial problems
CO305.4	ANALYSING	ANALYSE different financial models in order to eliminate substantial risk of poor spreadsheet coding
CO305.5	EVALUATING	FORMULATE an idea and acceptable solutions to solve different problems in the area of financial management
CO305.6	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, Perform 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 Sengupta, 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		312FINTECH: BLOCKCHAIN & ITS APPLICATIONS
2 Credits	LTP: 1:1:0	Subject Elective (SE) Course – FINTECH

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO312FINTECH.1	REMEMBERING	DESCRIBE the key concepts of Blockchain
CO312FINTECH.2	UNDERSTANDING	Understanding the Technical Cryptographic Elements in Blockchain
CO312FINTECH.3	APPLYING	APPLY various platform used in Blockchain.
CO312FINTECH.4	ANALYSING	ANALYZE Blockchain applications with the help of Cases
CO312FINTECH.5	EVALUATING	EVALUATE Blockchain applications with the help of Cases
CO312FINTECH.6	CREATING	ADAPT the platform & Applications of Blockchain analysis and build their own platforms & Applications

- 1. Blockchain Foundations:** The Brief, Brief History of Blockchain, The Move to Decentralization Ledgers, Distributed Ledgers and Consensus, Need a Decentralized Ledger System, Centralized Trusted Party - Advantages and Disadvantages, Security, Integrity and Privacy Issues of a Decentralized System. **(4+1)**
- 2. The Technical Cryptographic Elements Side:** Cryptography, Cryptographic Elements: Public Key & Private Key and Signing, Cryptographic Elements: Digital Signature & Hash Value. **(5+1)**
- 3. Blockchain Platforms:** Classification of Blockchain Platforms. An Overview of the 5 Key Perspectives. Highlights of Major Blockchain Platforms, Concept of Ethereum, Proof of Work and Proof of Stake, Token. **(6+1)**
- 4. Blockchain Applications:** Selection Criteria for Blockchain, Blockchain and Enterprise – A Technology of Coordination. **(5+1)**
- 5. The Limitations, Opportunities and Challenges of Blockchain:** 5 modules in Blockchain system, Limitations of Blockchains, Risks and Limitations of Blockchain.

Suggested Text Books:

1. Blockchain Revolution by Don and Alex Tapscott
2. The Book of Satoshi by Phil Champagne
3. The Basics of Bitcoins and Blockchains by Antony Lewis
4. The Blockchain Developer by Elad Elrom
5. Crypto assets by Chris Burniske and Jack Tatar

Suggested Reference Books:

1. Wharton professor and author Kevin Werbach “Blockchain”
2. The Basics of Bitcoins and Blockchains by Antony Lewis
3. The Truth Machine: The Blockchain and the Future of Everything Michael Casey and Paul Vigna

Semester III		313 FINTECH: Financial Risk Analysis
2 Credit	LTP : 1:1:0	Subject Elective (SE) Course – Fintech

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

CO#	Cognitive Ability	Course Outcomes
CO313FINTECH.1	Remembering	Describe various concept associated with risk management and financial risk management.
CO313FINTECH.2	Understanding	Exemplify the financial risk management processes, frameworks.
CO313FINTECH.3	Applying	Determine the various building blocks of risk management system and strategies.
CO313FINTECH.4	Analyzing	Classify various risks associated with enterprise, banks, insurance etc.
CO313FINTECH.5	Evaluating	Formulate the strategies to overcome with currency risk, credit risk, interest rate risk, legal risk, asset liability risk, liquidity risk etc.

1. 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)

2. 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)

3. 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)

4. 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)

5. 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 Indian Forex markets, forwards and non- deliverable forwards, cross-currency risk analysis.

(3+3)

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,
6. Financial Times Prentice Hall Risk Takers, Marthinsen, John, Pearson Prentice Hall, 20096.

Semester III		314 FINTECH – Algorithmic Trading
2 Credits	LTP: 1:1:1	Subject Elective (SE) Course – Fintech

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO314FINTECH.1	REMEMBERING	DESCRIBE the basic concepts of Algorithmic Trading.
CO314FINTECH.2	UNDERSTANDING	EXPLAIN the applications of signal generation and trading strategies of algorithmic trading.
CO314FINTECH.3	APPLYING	DEVELOP a thought process to trading with algorithmic trading strategies, system architecture.
CO314FINTECH.4	ANALYSING	ANALYZE the risk in algorithmic trading and system architecture, compliance process and profitability in algorithmic trading.
CO314FINTECH.5	EVALUATING	SELECT the right signal, strategies and risk in algorithmic trading.
CO314FINTECH.6	CREATING	COMBINE various tools and functions of algorithmic trading in live market and scenarios for Profitable trading.

- 1. Introduction to Algorithmic Trading:** Basic concepts regarding modern trading setups, Understanding Algorithmic trading concepts, components of an algorithmic trading system, Evolution of Algorithmic Trading, Different Trading Methodologies, Trends in Algorithmic Trading: Global and India, Benefits of Algorithmic Trading. (4+1)
- 2. Algorithmic trading signal generation and trading strategies:** Different Order Types, Designing trading strategies based on trends & momentum- technical analysis, Execution Trading Strategies, Trading Strategies - Calendar Spread, Cash Future Arbitrage Strategy, Index Arbitrage, Pair Trading, News Based Trading Strategies, Conversion- Reversal. (5+1)
- 3. Algorithmic Trading- System Architecture:** Market Data, CEP Engine, Order Routing / Order Manager, Colocation, Smart Order Routing (SOR), Connectivity Options (6+1)
- 4. Risk management in Algorithmic Trading:** Managing risk of algorithmic strategies, Differentiating between types of risk and risk factors, differentiating the measures of risk, Risk Management Specific to High Frequency & Algorithmic Trading. (5+1)
- 5. Audit and Compliance process & Challenges in Algorithmic trading:** International Organization of Securities Commissions, Auditing Process and Requirements (As defined by NSE for member-broker), SEBI Recommendations on Algorithmic Trading, Software Testing and Empanelment, Exchange Audits, Technology and System Audit, Compliance Requirements. Challenges in Algorithmic Trading- Adapting to market participants and conditions, strategy performance in backtester Vs. Live Market, Continued Profitability in Algorithmic trading. (5+1)

Suggested Text Books:

1. Learn Algorithmic Trading, Sebastien Donadio & Sourav Ghosh, Packt Publishing
2. An Introduction to Algorithmic Trading: Basic to Advanced Strategies (Wiley Trading Book 545) 1st Edition,
3. Algorithmic Trading Strategies: Highly Profitable Algorithmic Trading Strategies for Forex and Cryptocurrency. David Hanson.

Suggested Reference Books

1. Algorithmic Trading Module, NSE
- 2.

Semester III		315 FINTECH – Digital Banking
2 Credits	LTP: 1:1:0	Subject Elective Course– SE-IL FINTECH

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 315 FINTECH.1	REMEMBERING	Remember various concepts and products in Digital Banking
CO 315 FINTECH.2	UNDERSTANDING	Explain and understand the significance and development of Digital Banking
CO 315 FINTECH.3	APPLYING	Compare and contrast the Branchless Banking and Traditional Banking
CO 315 FINTECH.4	ANALYSING	Analyse the payment system of digital banking from consumer's point of view
CO 315 FINTECH.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 – Luigi 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, Lorian Pelizzon, Nicolas Perony
2. www.rbi.org.in

Semester III		SE-IL– 316 Personal Finance and Wealth Management
2 Credits	LTP: 1:1:0	Subject Elective Course FINTECH

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 316 FINTECH.1	REMEMBERING	UNDERSTAND the need and aspects of personal financial planning
CO 316 FINTECH.2	UNDERSTANDING	Describe the investment options available to an individual
CO 316 FINTECH.3	APPLYING	IDENTIFY types of risk and means of managing it
CO 316 FINTECH.4	ANALYSING	DETERMINE the ways of personal tax planning

CO 316 FINTECH.5	EVALUATING	EXPLAIN retirement and estate planning for an individual and design a financial plan.
CO 316 FINTECH.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+1)
- 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.
(5+1)
- 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.
(5+1)
- 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.
(5+1)
- 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.
(5+1)

Note:

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

Suggested Text Books:

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

Suggested Reference Books:

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

Semester III		317 SE-IL FINTECH - Fintech Regulation & Ethics
2 Credits	LTP: 1:1:0	Subject Elective Course – FINTECH

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO 317 FINTECH.1	REMEMBERING	DESCRIBE the basic concepts in fintech regulation
CO 317 FINTECH.2	UNDERSTANDING	IDENTIFY the participants in the fintech domain
CO 317 FINTECH.3	APPLYING	EXPLAIN the legal framework in fintech regulation
CO 317 FINTECH.4	ANALYSING	ANALYSE the role of regulatory mechanisms in fintech
CO 317 FINTECH.5	EVALUATING	SUMMARIZE the ethical issues that can arise in fintech

1. **Fintech landscape in India:** Fintech and Regtech; Emerging technologies in the financial services sector; Fintech landscape - Angel Funds, Venture Capital Funds, Insurance Self-Network Platform, Insurance Web Aggregators, Trade Receivables Discounting System (TReDS), Account Aggregators, Digital Wallets & Payments, Robo Advisory, Online Banking, Blockchain, Peer-to-peer (P2P) lenders, Securities, and other financial assets; Need for regulation and challenges in the regulation of fintech (5+1)
2. **Regulators in Fintech domain:** RBI, SEBI, International Financial Services Centres Authority (IFSCA), Financial Intelligence Unit, PFRDA and IRDAI; Regulatory Sandbox (5+1)
3. **Legal Framework for Fintech regulation:** Evolution of fintech laws in India; Overview of applicable aspects of - Banking Laws, Capital Markets Laws, Competition Laws, Economic Offences Laws, Foreign Exchange Laws, Insolvency Laws, Insurance Laws, Technology Laws, Intellectual Property Laws, General Data Protection Regulation (GDPR) (5+1)
4. **Enforcement Agencies for Fintech regulation:** Enforcement and Investigating agencies (CBI, CDDT, ED, NPCI, CCIL) – an outline of the role and responsibilities of the agencies; Functions of Tribunals- National Company Law Tribunal (NCLT), National Company Law Appellate Tribunal (NCLAT) & Securities Appellate Tribunal (SAT) (5+1)
5. **Ethics in Fintech:** Ethical issues relating to finance; ethical ways in which emerging technologies should be implemented; Cybersecurity, financial crimes, and ethics in online financial transactions; human biases and prejudices in AI; fintech for financial inclusion (5+1)

Suggested Textbooks:

1. The Journey of REGTECH by Vivek Dubey; Michael Terence Publishing
2. Fintech Law in a Nutshell (Nutshells) 1st Edition by Chris Brummer; West Academic Publishing
3. A Guide to Financial Regulation for Fintech Entrepreneurs 1st Edition by Stefan Loesch; Wiley
4. FinTech: Law and Regulation (Elgar Financial Law and Practice) by Jelena Madir
5. Routledge Handbook of Financial Technology and Law- Fintech and the limits of financial regulation by Saule T Omarova; <https://www.routledgehandbooks.com/doi/10.4324/9780429325670-3>
6. FinTech Regulation: Exploring New Challenges of the Capital Markets Union by Valerio Lemma, Springer; 1st ed. 2020 edition
7. Regulating FinTech in Asia: Global Context, Local Perspectives by Mark Fenwick (Editor), Steven Van Uytsel (Editor), Bi Ying (Editor); Springer
8. FinTech, Artificial Intelligence and the Law: Regulation and Crime Prevention; Edited By Alison Lui, Nicholas Ryder; Routledge
9. Handbook on Ethics in Finance edited by Leire San-Jose, José Luis Retolaza, Luc van Liedekerke; Springer

Suggested Reading:

1. Fintech: The New DNA of Financial Services by Pranay Gupta
2. FINTECH: Beginner Guide to Fintech Innovation, Regulation and Startup, by Scorpio Digital Press
3. Scott, B. (2017). Hard Coding Ethics into Fintech. Finance & The Common Good (<http://www.ethicsinfinance.org/wp-content/uploads/2018/01/Brett-Scott-Hard-coding-ethics-into-fintech.pdf>)

Websites of all regulatory bodies and enforcement agencies

Subject Core (SC)/Subject Elective (SE) Courses - Semester IV
Specialization: FINTECH

Semester IV		403 FINTECH : Financial Reporting and Analysis
3 Credits	LTP: 2:1:1	Subject Core (SC) Course – Fintech Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO403FINTECH.1	REMEMBERING	Describe the basic concepts related to Financial Reporting taught through the syllabus.
CO403FINTECH.2	UNDERSTANDING	Explain, in detail, all the theoretical concepts taught through the syllabus.
CO403FINTECH.3	APPLYING	Do all the necessary calculations pertaining to financial reporting.
CO403FINTECH.4	ANALYSING	Analyse the situation and decide the key elements of financial reporting through the financial statements.
CO403FINTECH.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. (8+2)
- 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. (7+2)
- 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”. (7+2)
- 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”. (7+2)
- 5. Miscellaneous Issues in Financial Reporting:** Reporting of Financial Instruments, Value Added Statements, Corporate Social Responsibility Reporting. (6+2)

Suggested Text Books:

1. Advanced Accountancy, Shukla Grewal, 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 IV		404 FINTECH - Current Trends in Fintech
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3 Credits	LTP: 2:1:1	Subject Core (SC) Course –Fintech
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Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO404 FINTECH.1	REMEMBERING	DEFINE the key concepts related to Fintech Landscape.
CO404 FINTECH.2	UNDERSTANDING	DIFFERENTIATE the various concepts and terms related to Fintech Landscape.
CO404 FINTECH.3	APPLYING	IDENTIFY the application of recent technologies in different sectors of the economy.
CO404 FINTECH.4	ANALYSING	EXAMINE the different technologies and illustrate the relevance of Fintech for business decisions.
CO404 FINTECH.5	EVALUATING	JUDGE the suitability of recent trends in the context of a given real-life business research problem from a data driven decision perspective.
CO404 FINTECH.6	CREATING	Create/Design different models to solve the business problem.

- 1. Banking, Financial Services and Insurance (BFSI) & Fintech :** Introduction to Fintech, Need of Fintech, Future of Fintech, Modern Banking Landscape, Dissecting Financial Services Value chain, Introduction to the Fintech landscape. **(7+2)**
- 2. Technology in Fintech:** Artificial Intelligence, Machine Learning, Application Process Interface, Immediate Payment Service/Unified Payment Interface, Robotic Process Automation, Natural Language Processing, Blockchain and Cryptocurrency. **(7+2)**
- 3. Digital Transformation:** Need for business transformation, Business Process Reengineering, Digital Lending, Payment System, Block Chain. **(7+2)**
- 4. Applications of Artificial Intelligence:** Fintech in transformation of Banks, Insurtech, Real Estate Technology, Lending and Crowd Funding, Challenges in implementation and doing business. **(7+2)**
- 5. Regulations:** Regulatory Sandbox, Global Regulations, Domestic Regulations (As defined under various acts in India), RBI, Ombudsman Scheme for Digital Transactions, UIDAI, Various acts which govern digital transactions. **(7+2)**

Learning Resources:

Reference Books:

1. Bank 4.0: Banking Everywhere, Never at a Bank – Brett King
 2. The Fintech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries – Janos Barberis
 3. Fintech in a Flash: Financial Technology Made Easy – Augustin Rubini
 4. FinTech Future: The Digital DNA of Finance – Sanjay Phadke
 5. The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries – Susanne Christi/Janos Barberis (Wiley, 2016)
 6. Machine Learning in Fintech
 7. Fintech Innovation: From Robo-Advisors to Goal Based Investing and Gamification - Paolo Sironi (Wiley, 2016)
- Supplementary Reading Material:** Research Papers, White Papers, and Articles by experts.

Semester IV		418 FINTECH Entrepreneurship in FinTech
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2 Credits	LTP: 2:0:0	Subject Elective (SE) Course – FinTech
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Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO418FINTECH.1	REMEMBERING	DEFINE the key terms, LIST the Attributes and Characteristics of Entrepreneurs features and ENUMERATE the Factors influencing Entrepreneurship Growth.
CO403FINTECH.2	UNDERSTANDING	UNDERSTAND the financing lifecycle of high-growth new ventures and startups
CO418FINTECH.3	APPLYING	APPLY financial innovation and technology in entrepreneurship
CO418FINTECH.4	ANALYSING	ANALYSE the technologies underlying crypto currencies and block chains in new business models
CO418FINTECH.5	EVALUATING	ASSESS the key technologies, business models, and companies of the startup fintech landscape.
CO418FINTECH.6	CREATING	DEVELOP a convincing business plan description to communicate value of the new venture to customers, investors and other stakeholders.

- 1. Foundations of Entrepreneurship:** features - Entrepreneur's competencies, attitude, qualities, and functions. Entrepreneurial scenario in India and Abroad. Small Business, Importance in Indian Economy, Types of ownership, sole trading, partnership, Important features of various types of businesses - corporate entrepreneurship, intrapreneurship - Role of Government in the promotion of Entrepreneurship, Entrepreneurship as a career, Entrepreneurship as a style of management, Emerging Models of Corporate Entrepreneurship. (5)
- 2. Startups in Emerging market:** Emerging market - definition, concept and features. India's start up revolution- Trends, Imperatives, benefits. The typical stages of a startup, opportunities for Startup in Finance sector. Legal foundations, regulatory environment and startup funding, Case studies on real fintech startups and their journey. (5)
- 3. Project Planning and Feasibility Studies:** The Concept of Project, Project Life Cycle - Project Planning, Feasibility – Project proposal & preparation of DPR (detailed project report) (5)
- 4. Entrepreneurial Strategy:** Generation of new business opportunity, Decisions under Uncertainty, entry strategy, environmental instability - Risk Reduction strategies, Market scope strategy- Imitation strategies. (5)
- 5. Creating New Business Model by using FinTech applications:** Subsectors where startups are either seeking to displace serving or sell them their services: Bitcoin/Ethereum (and ICOs); personal finance; equity crowd funding; lending; payments; insurance; and remittances. Blockchain, peer-to-peer platforms, and artificial intelligence (e.g. machine learning) are key technologies underlying many of the new business models. (5)

Suggested Text Books

Suggested Reference Books:

1. Meyer, M. H., & Crane, F. G. (2010). Entrepreneurship: An innovator's guide to startups and corporate ventures. SAGE Publications.
2. Lerner, Josh, Ann Leamon, and Felda Hardymon. Venture Capital, Private Equity, and the Financing of Entrepreneurship. New York: John Wiley & Sons, 2012.
3. Sironi, Paolo. FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification (The Wiley Finance Series), Wiley, 2016.
4. Ries, E. (2011). The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses. Random House LLC.
5. Innovation and Entrepreneurship, Peter F. Drucker

Suggested Audio Visuals link

Suggested Journals

Suggested Swayam Course

Semester IV		419FINTECH: Data Security for Fintech
2 Credits	LTP: 1:0:1	Subject Elective (SE) Course – Fintech

Suggested change in title: Cyber Security for Fintech

Being technical course, Additional check from technical expert required.

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO419FINTECH.1	REMEMBERING	UNDERSTAND the basic concepts of cyber security
CO419FINTECH.2	UNDERSTANDING	EXPLAIN the technological updates in cyber security
CO419FINTECH.3	APPLYING	IDENTIFY the techniques used for security in financial technology
CO419FINTECH.4	ANALYSING	ANALYSE cyber-crimes and the laws to mitigate them
CO419FINTECH.5	EVALUATING	Evaluate the threats in fintech

- 1. Introduction to Cyber Security:** Introduction to Cyber Crime, Information Security, Securing web browser, email security, smartphone security **(4+1)**
- 2. Cyber Security Initiatives in India:** Counter Cyber Security Initiatives, Cyber Security Exercise, Cyber Security Initiative Handling, Cyber Security Assurance **(4+1)**
- 3. Security in Evolving Technology:** Biometrics, Mobile Computing and Hardening on android and IOS, IOT Security, Web server configuration and Security. Introduction, Basic security for HTTP Applications and Services, Basic Security for Web Services like SOAP, REST etc., Identity Management and Web Services, Authorization Patterns, Security Considerations, Challenges. Open Source/ Free/ Trial Tools: ADB for android, x code for IOS, Implementation of REST/ SOAP web services and Security implementations Reviews and Conclusion **(4+1)**
- 4. Security in Fintech:** Online Banking Security, Mobile Banking Security, Security of Debit and Credit Card, UPI Security, Security of Micro ATMS, e-Wallet Security, Security Guidelines for Point of Sales (POS). **(4+1)**
- 5. Computer Forensic Detection and Incident Management:** Computer Investigation Process and Collecting Digital Evidences. Cyber Crime Investigation and Understanding various trace back Techniques. Acquiring data, duplicating data and Recovering deleted Files. Understanding Boot Process and Important System Files Investigating Network Traffic, Cyber Crimes and Laws Understanding Various Corporate Threats. Case Studies. Setup lab with bWAPP Set up Burp Suite -Configure Firefox and add certificate Mapping and scoping website Spidering Active and passive scanning, Scanner options and demo Introduction to password security Intruder. Intruder attack types Payload settings, Intruder settings **(9+1)**

Suggested Books:

1. Gupta Sarika, "Information and Cyber Security", Khanna Publishing House, Delhi.
2. Nina Godbole, "Information System Security", Wiley
3. Introduction to Cyber Security available at <http://uou.ac.in/foundation-course>
4. Fundamentals of Information Security <http://uou.ac.in/progdetail?pid=CEGCS-17>
5. Cyber Security Techniques <http://uou.ac.in/progdetail?pid=CEGCS-17>
6. Cyber Attacks and Counter Measures: User Perspective <http://uou.ac.in/progdetail?pid=CEGCS-17>

Semester IV		420 FINTECH SE-FIN-04- Financial Analytics
2 Credits	LTP: 1:0:1	Subject Elective Course – FINTECH Management

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

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO420FINTECH.1	REMEMBERING	Remember various concepts and applications of Analytics in Finance
CO420FINTECH.2	UNDERSTANDING	Explain and Understand the significance of Analytics in Finance
CO420FINTECH.3	APPLYING	Identify and apply various analytical tools in Finance.
CO420FINTECH.4	ANALYSING	Analyse the significance of analytics in various financial situations.
CO420FINTECH.5	EVALUATING	Examine various models of analytics and form an opinion on use of relevant models.

1. **Introduction to Financial Analytics:** Definition, relevance and scope financial Analytics, Components of Financial Analytics, Features of Financial Analytics recent trends in financial analytics. (4+1)
2. **Financial data & Statistics** – Nature of data in finance and sources of financial data, cleaning and pre-processing data, building model using accounting and financial data. Statistics in Financial Analytics- Probability, Normal, Lognormal and distribution properties, decision making under uncertainty, use of linear regression model in finance, data visualisation using excel, R/Python/Tablue etc., analysing the trends and decision making. (5+1)
3. **Financial Time Series, forecasting & Portfolio Analytics:** Asset Returns, Distributional Properties of Returns, Review of Statistical Distributions and properties of financial time series, Price Asset Portfolio Models: Basics of portfolio construction, Markowitz Theorem, Capital Asset Pricing Model, Diversification and Portfolio Optimization. (6+1)
4. **Modeling Volatility and Risk:** Characteristics of volatility. Modeling volatility using ARCH/GARCH models. Measuring and modeling risk. Application of Value at Risk (VaR). Modeling Credit Risk: Corporate Liabilities as contingent claims, Endogenous default boundaries and optional Capital Structure, Intensity Modeling, Rating based term-structure models, Credit risk and interest-rate Swaps, Modeling dependent defaults. (5+1)
5. **Business Valuation Analytics:** Cash Flow statement – prepare and analyse, modelling and forecasting of financial statement & business valuation. Capital budgeting – application and issues. Use of real option for better financial outcomes. (5+1)

Suggested Books:

1. Dixon, Mathew F., Halperin, Igor, Bilokon, Paul, “ Machine Learning in Finance”, O’Reilly, 2019
2. Foundations of Machine Learning, Mehryar Mohri, Afsin Rostamizadeh and Ameet Talwalkar, MIT Press, Second Edition, 2018.
3. Financial Analytics with R _ Mark J. Bennets, Cambridge University Press
4. William G. Foote. 2017. Financial Engineering Analytics: A Topical Manual Using R.
5. Ruey S. Tsay (2010), “Analysis of Financial Time Series”, 3rd Edition, Wiley,
6. Duffie, D. and Singleton, K.J (2003), “Credit Risk: Pricing, Measurement, and Management”, Princeton University Press.
7. Christian Gourieroux & Joann Jasiak (2002), “Financial Econometrics: Problems, Models, and Methods”, Princeton University Press.
8. David Ruppert (2011), “Statistics and Data Analysis for Financial Engineering”, Springer.

Semester IV	421 FINTECH SE-FIN-04- Digital Payment Systems
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2 Credits	LTP: 1:0:1	Subject Elective Course – FINTECH Management
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Course Outcomes : On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO421FINTECH.1	REMEMBERING	Remember various concepts and products in Digital Payment
CO421FINTECH.2	UNDERSTANDING	Explain and Understand the significance of Digital Payment system
CO421FINTECH.3	APPLYING	Identify and explain the recurring payment instruments and how they function.
CO421FINTECH.4	ANALYSING	Differentiate between lending and crowd funding.
CO421FINTECH.5	EVALUATING	Examine various models of digital payment system and give your opinion

1. Introduction to Digital Payment System: Meaning, Features, Types, Benefits and Barriers to Digital Payment; Role of digital payment in India, Reforms in Digital payments. Innovative Payment Methods: Methods of Digital payments [Debit Card, Credit Card, Smart Cards, e-Money], Micropayments: Mobile payments, Wireless payments, digital wallets, the Google wallet all Apps, Risks involved in digital payments. (5+1)

2. Card Payment and POS Machines : Basics of Cards, PCI-DSS, Card design- Magstripe, EMV, Card Scheme, Factors of authentication , MDR & MCC, Card backend process, Disputes chargeback, Refund and Profitability, Point of Sale (POS): Types of POS and types of transactions, Business Model of POS machine, Back end process of POS machine, Fund settlement between parties and risk , Payment & Remittance, Interoperability in payments and Grievance handling. (5+1)

3. Recurring Digital Payment: Overview and understanding of ACH (NACHA/NACH) and ABPS payments. Transaction flow of ACH & NACH, Features and benefits of ACH & NACH, Brief on BACS. (5+1)

4. Lending and Crowd funding: Lending and Personal finance- for individuals identifying the possibilities of lending on online platforms for individuals; FinTech Business Applications; Crowdfunding and Business Financing: Identifying the possibilities of Lending /Crowdfunding on online platforms for business. (5+1)

5. Crypto Currencies and Block Chains - Introduction: Cryptocurrency- definition, features, types, bitcoin & its features. Blockchain fundamentals – definitions, features, types, Components of Blockchain ecosystem, structure & mechanism. (5+1)

Suggested Books:

1. Bitcoin and Cryptocurrency Technologies. Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder and Jeremy Clark.
2. Blockchain Basics: A Non-Technical Introduction in 25 Steps , Daniel Drescher
3. Step by Step Crowd funding: Everything you need to Raise money for the crowd by Joseph Hogue, CFA
4. Digital Banking – Indian Institute of Banking and Finance

Reference Material:

1. Banking Beyond Banks and Money: A guide to Banking Services in Twenty first Century – Paolo Tasca, Tomaso Aste, Lorian Pelizzon, Nicolas Perony
2. John E. Marshall & vipul K. Bansal : Innovative methods (Prantice Hall)
3. Digital Payments- Trends, Issues and Opportunities- Ratan P. Watal Principal Adviser, NITI Aayog.
4. www.rbi.org.in
5. <https://cardconnect.com/launchpointe/running-a-business/payment-processing-101>