ಡಾ. ಮನಮೋಹನ ಸಿಂಗ್
ಬೆಂಗಳೂರು ನಗರ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

Dr. MANMOHAN SINGH
BENGALURU CITY UNIVERSITY

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No.MSBCU/BoS/Syllabus-PG/Commerce & Mgmt/186 /2026-27 Date: 24.08.2026

NOTIFICATION

Sub: Syllabus for the III & IV Semester Post Graduate Courses in the Faculty of Commerce & Management–reg

Ref:
1. Recommendations of the Boards of Studies in the Faculty of Commerce and Management
2. Academic Council resolution No.08 dated.24.08.2026
3. Orders of Vice-Chancellor dated. 24.08.2026

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The Academic Council in its meeting held on 24.08.2026 has approved the syllabus prepared by different Board of Studies for the III & IV Semester Post Graduate Courses in the Faculty of Commerce and Management. Accordingly, the following CBCS Syllabus for the III & IV Semester PG Courses of Commerce and Management Faculty are hereby notified for implementation effective from the academic year 2026-27

Sl. No.	Programmes
1.	MBA [Day & Evening] – III & IV Semester
2.	M.Com [General] – III & IV Semester
3.	M.Com [Financial Analysis] – III & IV Semester
4.	M.Com [Fintech] – III & IV Semester

The detailed Syllabi for above subjects are notified in the University Website: www.bcu.ac.in for information of the concerned.

REGISTRAR

Copy to;

1. The Registrar(Evaluation), Dr. Manmohan Singh Bengaluru City University
2. The Dean, Faculty of Commerce, MSBCU.
3. The Principals of the concerned affiliated Colleges of MSBCU- through email.
4. The P.S. to Vice-Chancellor/Registrar/Registrar (Evaluation), MSBCU.
5. Office copy / Guard file./ University Website: www.bcu.ac.in

Dr. Manmohan Singh Bengaluru City University

2026-27 onwards

M.Com (FinTech)

(CBCS – Semester Scheme)

Department of Studies and Research in Commerce

Jnana Jyothi Central College Campus,

Dr. Ambedkar Veedhi

Bengaluru -560 001

M.Com (Fintech)

REGULATIONS PERTAINING TO M.COM (FINTECH) COURSE UNDER CBCS SYSTEM FROM 2025-26 ONWARDS

1.OBJECTIVE:

The broad objective of the M.Com (Fintech) course is to impart to the Students, professional education and training in various aspects of business and its environment and provide them with opportunities to develop managerial and analytical skills in order to meet the challenges of business at the national and global level. The platform will also enrich the students to cope up with recent changes in business world.

2.Eligibility for Admission:

A candidate who has passed the B.Com./B.B.A./BMS Degree examination of this University or of any other University recognized as equivalent thereto and has secured not less than 50% of the marks in the aggregate in all the Commerce subjects of Business Education in all the years shall be eligible for admission to the course. In case of SC/ST/CAT- 1 students and PWD Students, there will be relaxation of 5% in the minimum required percentage of marks.

3. Duration of the Course:

The course of study for M.Com (Fintech) degree shall extend over a period of two years divided into 4 (four) semesters. Each Semester will be of 16 weeks or more duration with a minimum of 90 actual working days.

4. Scheme of Instruction:

1. In each semester there will be six to seven papers (Including practicals)
2. There will be 24 to 27contact hours per week. (Including practicals)

5.Attendance:

Each course (theory/practical) shall be treated as an independent unit for the purpose of attendance. A student shall attend a minimum of 75% of the total instruction hours in a course (theory/practical) including tutorials and seminars in each semester.There shall be no provision for condonation of shortage of attendance and a student who fails to secure 75% attendance in a course, shall be required to repeat that semester.

6.Medium of Instruction:

The medium of instruction shall be English. However, a candidate will be permitted to write the examination either in English or in Kannada.

7.Registering for the Examination:

A candidate shall register for all the papers of a semester when he appears for the examination of that semester for the first time.

8.Scheme of Examination:

8.1 There shall be a University examination at the end of each semester. The maximum marks for the university examination in each paper shall be 100 as shown below:

Particulars	Course	Duration	Internal Assessment	Theory Examination	Total Marks
Subject without Practicals	M.Com (Fintech)	2 years,(4 Semesters)	30	70	100

8.2 for Practical Examination, The student may be provided with a **structured financial dataset and a practical problem** based on any of the 15 prescribed experiments.

Examination Pattern	
Component	**Marks**
Program Execution	50
Interpretation of Results	20

Practical Total	**70**
Viva Voce	**30**
Total	**100**

8.3 Each semester will normally have six (Hardcore) and one (soft core) paper and each shall be for 100marks.

8.4(i) The composition of theory and internal assessment marks for each paper will be 70 and 30 respectively.

ii. Duration of examination per theory paper of 70 marks shall be for 3 hours practicals it will be 3 hours hours for each batch.,

iii. Practical records will be evaluated as part of the practical examination.

iv. In case of practical examinations, students will be assessed on the basis of knowledge of processes, skills operations involved, results/calculations and reporting.

v. Practical examination will be conducted by the Board of Examiners with Pre-approved Panel of Examiners.

8.5 Every theory paper shall ordinarily consist of two/three sections, developed to test conceptual skills, understanding skills, comprehension skills, articulation, and application skills in the question paper's composition in examinations.

8.6(i) In case of theory papers the various components of internal assessment will be as follows:

a)Assignment – 5 Marks

b)Attendance – 5 marks (75% => 80% - 1 Mark, 80% > 85% - 2 Marks, 85% >90% - 3 Marks, 90% to 95% - 4 Marks, 95% => 5 Marks)

c) Internal Test – 20 Marks

(The test shall be for 11/2 - hour duration carrying 40 marks. The marks scored by the candidate shall be later reduced to 20 marks).

(ii) The Departmental Council / College / Centre shall notify in the first week of each semester, scheme of internal assessment, containing the details of tests, assignments, and seminars.

(iii)Co-ordination Committee: In order to monitor IA tests there shall be Co-ordination Committee consisting of the following:

1.Chairman BOS: Chairman

2.Two Senior Faculty Members

3.Two members from affiliated colleges as recommended by the BOS

4.For Practical Subjects, A Viva-Voce and Practical Exam for 30 marks will be conducted by the Board of Examiners.

(iv)At least one week prior to the last working day, I.A. marks secured by the candidates shall be displayed on the notice board.

(v)The Departmental Council / College / Centre may decide to give test/seminar to candidates who absent themselves for the above, only if the Council is convinced that the absence of the candidate is on valid grounds. However, the Council will allow the candidate to avail of this provision within the duration of that semester.

(vi)The statement of internal assessment shall be sent to the Registrar (Evaluation) one week prior to the commencement of that particular semester examination.

8.7 Question Paper Pattern:

Section – A

Answer the following. Each Question Carries one Mark (15x1=15)

(Only Objective type)

Section – B

Answer any Three Questions out of Five. Each Question Carries Five Marks (3x5=15)

Section – C

Answer any Three Questions out of Five. Each Question Carries Ten Marks (3x10=30)

Section – D: (Case Study)

Answer the following question (1x10=10)

8.8 MOOC Course & Certification Programme:

A. The student has to undergo a certification course (in any stream of his or her choice) and in any MOOC platform such as SWAYAM, NPTEL, AICTE, CEC of 8 Weeks / 12 Weeks / 16 Weeks Programme at the beginning of the 1st semester and submit the certificate at the end of 2nd Semester examination compulsorily. The Grade obtained will be mentioned in the 2nd Semester Marks Card by the University after the scrutiny by the Members of Board of Studies. The college has to collect the Certificate (hard copy) and submit a list to the University.

B. Certification Programme: The student must undergo a Skill-based Training Certification Course from FKCCI / MSME / SME / KSSIC / KASSIA / BCIC and submit the certificate within the 3rd Semester examinations to the Head of the department of PG Studies. The allotment of the skill-based training program is at the beginning of the 3rd semester by doing an MOU (memorandum of understanding) with the industry in consultation with BOS and panel members. In consultation with BOS, the department should make a provision in the 3rd semester time table and allow the students to attend the Skill-based Training Certification Programme from an industry.

8.9 Every semester Industry Visit and NGO Visit is compulsory. The combined report should be submitted by students by the end of the semester.

8.10 Capstone Project

Note: The Research Supervisor should have a Ph.D. degree / a minimum of 10 Years of Research Experience with atleast 10 Publications in UGC Recognized Journals.

9.Board of Examiners and Valuation of Answer Scripts:

9.1 There shall be a Board of Examiners for scrutinizing and approving the question papers and scheme of valuation.

9.2 About 50% of the examiners appointed for setting of question papers and valuation work in each semester shall be external.

9.3 Each written paper shall be valued by one internal examiner and one external examiner.

9.4 If the difference in marks between two valuation is more than 15%, the Chairman, BOE shall arrange for third valuation by examiners from the approved panel of examiners.

9.5 In case of two valuations, the average of the two valuations and if there are three valuations, the average of the nearest two valuations shall be taken for declaring results. The candidates not satisfied with the results may apply for photocopies of the answer scripts and / or challenge valuation (If University Regulations Permits).

10. Classification of Successful candidates:
Minimum for a pass in each paper shall be 40% in Semester paper and 50% in aggregate of all the papers in that semester. The results of successful candidates at the end of each semester shall be declared on the basis of Percentage of Aggregate Marks and in terms of Grade Point Average (GPA) and alpha – sign grade. The results at the end of the fourth semester shall also be classified on the basis of Percentage of Aggregate Marks and on the basis of the Cumulative Grade Point Average (CGPA) obtained in all the four semesters and the corresponding overall alpha – sign grade. An eight-point grading system, alpha – sign grade as described below shall be adopted.

First Class with Distinction	70% and above (A+, A++ or O)
First Class	60% and above but less than 70% (A)
High Second Class	55% and above but less than 60% (B+)
Second Class	50% and above but less than 55% (B)
Pass Class	40% and above but less than 50% (C)

Eight Point Alpha – Sign Grading Scale:

Grade PointAverage	<4	4-<5	5-<5.5	5.5-<6	6-<7	7-<8	8-<9	9-10
Alpha-Sign Grade:	D	C	B	B+	A	A+	A++	O

The Grade Point Average (GPA) in a Semester and the Cumulative Grade Point Average (CGPA) at the end of fourth semester shall be computed as follows:

Computation of Grade Point Average(GPA):
The grade points (GP) in a course shall be assigned based on the basis of actual marks scored in that course as per the table below. They shall be generally percentages divided by 10. The Grade Point Weights (GPW) shall then be calculated as the product of the grade points earned in the course and the credits for the course. The total GPW for a semester is obtained by adding the GPW of all the courses of the semester.
ILLUSTRATION 1 (26 Credits)

Papers	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**Total**
Max. marks	100	100	100	100	100	100	100	700
% Marks Obtained	77	73	58	76	64	66	82	496
Grade Points Earned (G.P.)	7.7	7.3	5.8	7.6	6.4	6.6	8.2	-
Credits for the Course (C)	4	4	4	4	4	4	2	26
Total GPW = GP x C	30.8	29.2	23.2	30.4	25.6	26.4	16.4	182

Semester Aggregate Marks: 496 / 700 = 70.86%

Classification of Result : First Class with Distinction

The GPA shall then be computed by dividing the total GPW of all the courses of study by the total credits for the semester, GPA = Total GPW / Total Credits = 182 / 26 = 7.0
Semester Alpha Sign Grade: A+

M.Com (Fintech)

ILLUSTRATION 2 (24 Credits)

Papers	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**Total**
Max. marks	100	100	100	100	100	100	600
% Marks Obtained	67	73	78	76	84	88	466
Grade Points Earned (G.P.)	6.7	7.3	7.8	7.6	8.4	8.8	-
Credits for the Paper	4	4	4	4	4	4	24
Total GPW = GP x C	26.8	29.2	31.2	30.4	33.6	35.2	186.4

Semester Aggregate Marks: 466 / 600 = 77.67%
Classification of Result: First Class with Distinction
GPA = Total GPW / Total Credits = 186.4 / 24 = 7.77
Semester Alpha Sign Grade: A++

11.Calculation of Cumulative Grade Point Average (CGPA):

The Cumulative Grade Point Average (CGPA) at the end of the fourth semester shall be calculated as the weighted average of the semester GPW. The CGPA is obtained by dividing the total of GPW of all the four semesters by the total credits for the programme

ILLUSTRATION I

Semester	**I**	**II**	**III**	**IV**	**Total**
Total Marks per Semester	700	700	600	600	2600
Total Marks Secured	496	560	466	510	2032
Semester Alpha Sign Grade	A+	A++	A+	A++	-
Semester GPA	7.0	8.0	7.77	8.5	-
Semester Credits	26	26	24	24	100
Semester GPW	182	208	186.5	204	822.9

Aggregate Percentage of Marks = 2032 / 2600 = 78.15 %
Classification of Result: First Class with Distinction
(CGPA)= Total of Semester GPW / Total Credits for the programme = 780.5 /100 = 7.805
Programme Alpha Sign Grade: A++

These are the sample illustrations of computing semester grade point averages and cumulative grade point average and the alpha – sign grades assigned.

12. **MINIMUM FOR A PASS:**

12.1 A candidate shall be declared to have passed the PG program if he/she secures at least a CGPA of 4.0 (Course Alpha-Sign Grade C) in the aggregate of both internal assessment and semester end examination marks put together in each unit such as Theory Papers / Practical's / Project Work / Dissertation / Viva-Voce/ Capstone project.

12.2 The candidates who pass all the semester examinations in the first attempts are eligible for ranks provided they secure at least CGPA of 6.0 (or Alpha-Sign Grade A).

12.3 The results of the candidates who have passed the fourth semester examination but not passed the lower semester examinations shall be declared as NCL (Not Completed Lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.

12.4 A candidate who passes the semester examinations in parts is eligible for only Class / CGPA and Alpha- Sign Grade but not for ranking.

12.5 **There shall be no minimum in respect of internal assessment.**

However minimum pass in each paper shall be 40% in semester end exam (25 Marks out of 70 Marks) and 50% aggregate of all papers in that semester including practical paper.

12.6 A Candidate who fails in any of the unit / dissertation / viva-voce shall reappear in that unit / dissertation / viva-voce and pass the examination subsequently.

13.CARRY OVER PROVISION: Candidates who fail in a lower semester examination may go to the higher semesters and take the examinations.

14. REJECTION OF RESULTS:

i. A candidate who fails in one or more papers of a semester may be permitted to reject the result of the whole examination of that semester.

Rejection of result paper wise shall not be permitted. A candidate who rejects the results shallappear for the examination of that semester in the subsequent examination.

ii. Rejection shall be exercised only once in each semester and the rejection once exercised shall not be revoked.

iii. Application for rejection along with payment of the prescribed fee shall be submitted to the Registrar (Evaluation) through the department/college together with the original statement of marks within 30 days from the date of publication of the result.

iv. A candidate who rejects the result is eligible for only class and not for ranking.

15.IMPROVEMENT OF RESULTS:

i)A candidate who has passed in all the papers of a semester may be permitted to improve the result by reappearing for the whole examination of that semester.

ii)The reappearance could be permitted twice during double the period without restricting it to the subsequent examination only. The regulation governing maximum period for completing various degree/ diploma programme notified by the University from time to time shall be applicable for improvement of results also.

iii) The student could be permitted to apply for the improvement examination 45 days in advance of the pertinent semester examination whenever held.

iv) If the candidate passes in all the subjects in reappearance, higher of the two aggregate marks secured by the candidate shall be awarded for that semester. In case the candidate fails in the reappearance, candidate shall retain the first appearance result.

v) A candidate who has appeared for improvement is eligible for class only and not for ranking. Internal assessment marks shall be shown separately in the marks card. A candidate who has rejected the result or who, having failed, takes the examination again or who has appeared for improvement shall retain the internal assessment marks already obtained.

A candidate who fails in any of the semester examinations may be permitted to take the examinations again at a subsequent appearance as per the syllabus and scheme of examination in vogue at the time the candidate took the examination for the first time. This facility shall be limited to the following two years.

16. POWER TO REMOVE DIFFICULTIES

i) If any difficulty arises in giving effect to the provisions of these regulations, the Vi e-Chancellor may by order make such provisions not inconsistent with the Act, Statutes, Ordinances or other Regulations, as appears to be necessary or expedient to remove the difficulty.
ii) Every order made under this rule shall be subject to ratification by the Appropriate University Authorities.

17. UPDATION OF SYLLABUS - The BOS has to revise the syllabus from time to time based on current trends and updations where ever it is necessary. The suggestions of faculties of commerce, considered for revision and updation of the syllabus with prior approval of BOS- PG Commerce, Faculty of Commerce and the Academic Council of the University.

M.Com (Fintech)

COURSE MATRIX

I SEMESTER

SL NO	Subject	Total Instruction Hrs	Duration of Exam (Hrs)	Marks			Credits
				IA	Exam	Total	
1.1	Foundation of Financial Technology & innovation	60	3	30	70	100	**4**
1.2	Python for Finance (Theory)	60	3	30	70	100	**4**
1.3	Python For Finance – Lab	60	3	---	Viva - 30 P - 70	100	**4**
1.4	Corporate Finance	60	3	30	70	100	**4**
1.5	Governance & Global Responsibility	60	3	30	70	100	**4**
1.6	Global Business Environment	60	3	30	70	100	**4**
1.7	Business Communication & Professional Skills	45	3	30	70	100	**2**
I SEMESTER TOTAL OF CREDITS							**26**

II SEMESTER

SL NO	Subject	Total Instruction Hrs	Duration of Exam (Hrs)	Marks			Credits
				IA	Exam	Total	
2.1	Financial Analytics using Python	60	3	30	70	100	**4**
2.2	Financial Analytics using Python-lab	60	3	---	Viva - 30 P - 70	100	**4**
2.3	Block chain Technology and Digital Currency	60	3	30	70	100	**4**
2.4	Quantitative Techniques for Finance	60	3	30	70	100	**4**
2.5	GST & Custom Duty	60	3	30	70	100	**4**
2.6	Digital Marketing	60	3	30	70	100	**4**
2.7	Business Models for Start ups	45	3	30	70	100	**2**
II SEMESTER TOTAL OF CREDITS							**26**

III SEMESTER

Paper Code	Subjects	Total Instruction Hrs	Duration of Exam (Hrs)	Marks			Credits
				IA	Exam	Total	
3.1	Data Visualization for Business and Finance	**60**	**3**	**30**	70	**100**	4
3.2	Data Visualization for Business and Finance -Lab	**60**	**3**	**-**	Viva - 30 P - 70	**100**	4
3.3	Artificial Intelligence and Machine Learning for Finance	**60**	**3**	**30**	**70**	**100**	4
3.4	Innovation Management	**60**	**3**	**30**	**70**	**100**	4
3.5	Corporate Valuation	**60**	**3**	**30**	**70**	**100**	4
3.6	Open Elective –Entrepreneurship & Start Ups	**60**	**3**	**30**	**70**	**100**	4
3.7	Technical Analysis and Trading Strategies	**45**	**3**	**-**	**70-T** **30-p**	100	2
III SEMESTER TOTAL OF CREDITS							26

IV SEMESTER

Paper Code	Subjects	Total Instruction Hrs	Duration of Exam (Hrs)	Marks			Credits
				IA	Exam	Total	
4.1	Cyber Security in Financial Services	**60**	**3**	**30**	**70**	**100**	4
4.2	FinTech Regulation and Compliance	**60**	**3**	**30**	**70**	**100**	4
4.3	Project Management	**60**	**3**	**30**	**70**	**100**	4
4.4	Sustainable Finance and ESG	**60**	**3**	**30**	**70**	**100**	4
4.5	International Taxation	**60**	**3**	**30**	**70**	**100**	4
4.6	Cap stone Project	***		****	---	**200**	**6**
IV SEMESTER TOTAL OF CREDITS							26

Name of the Course : Foundation of Financial Technology and Innovation		
Course Code : 1.1	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course introduces students to the foundations of Financial Technology and its transformation of traditional financial services. It examines the evolution of financial services, the FinTech ecosystem, digital banking, payment services, FinTech business models, financial inclusion, customer-centric financial services, and the strategic transformation of the financial industry. The course provides a conceptual foundation for understanding how technology-enabled business models are reshaping modern financial services.

Course Objectives:

1. Understand the evolution, characteristics, ecosystem, and significance of Financial Technology.
2. Examine the transformation of traditional financial services through digitalisation and technology-enabled business models.
3. Analyse digital banking, payment services, digital lending, and other FinTech-based financial services.
4. Evaluate FinTech business models, customer-centric financial services, and their contribution to financial inclusion.
5. Examine the strategic opportunities, challenges, and transformation of the financial services industry through FinTech.

Course Outcomes:

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

CO1: Explain the evolution, characteristics, ecosystem, and significance of Financial Technology.

CO2: Analyse the transformation of traditional financial services through digitalisation and technology-enabled service delivery.

CO3: Evaluate digital banking, payment services, digital lending, and other FinTech-based financial services from a business perspective.

CO4: Analyse FinTech business models, customer-centric financial services, and their contribution to financial inclusion.

CO5: Evaluate the strategic opportunities, challenges, and transformation of the financial services industry through FinTech.

MODULE 1	**Foundations and Evolution of FinTech**	**12 Hours**

Meaning and Definition of Financial Technology; Evolution of Financial Services; From Traditional Finance to Digital Finance; Characteristics of FinTech; Drivers of FinTech Development; FinTech as a Transformation of Financial Services; FinTech Ecosystem and its Participants; Banks and Financial Institutions; FinTech Firms and Technology Companies; Consumers and Businesses; Financial Service Intermediaries and their Changing Role; Global FinTech Landscape; Indian FinTech Landscape; Major Segments of the FinTech Industry; Growth and Importance of FinTech in the Financial Economy; Opportunities and Challenges of FinTech.

MODULE 2	**Digital Transformation of Financial Services**	**12 Hours**

Digital Transformation of Banking and Financial Services; Traditional Banking versus Digital Banking; Digital Banking Models; Branchless Banking; Internet Banking and Mobile Banking; Digital Customer Experience; Self-Service Financial Services; Digital Onboarding and Customer Journey; Electronic Financial Services; Digital Payment Ecosystem; Payment Service Providers; Payment Gateways; Merchant Payments; Digital Wallets; Evolution of India's Digital Payment Ecosystem; UPI, NEFT, RTGS and IMPS – Business and Operational Perspective; Benefits of

Digital Financial Services; Challenges in Digital Service Delivery; Changing Customer Expectations in Digital Financial Services

MODULE 3	FinTech Business Models and Services	12 Hours

Concept of FinTech Business Models; Value Proposition in FinTech; Value Creation and Value Delivery; Platform-Based Financial Services; Marketplace Models; Subscription and Transaction-Based Models; Revenue Models in FinTech; Digital Lending and Alternative Lending Models; Peer-to-Peer Lending; Digital Wealth Management – Business Perspective; Technology-Enabled Insurance Services; Embedded Financial Services; Banking-as-a-Service (BaaS); Financial Service Aggregation; Comparison of Traditional and FinTech Business Models; Customer Acquisition and Retention in FinTech; Network Effects and Platform Economics in Financial Services; Business Opportunities and Challenges in FinTech.

MODULE 4	FinTech, Financial Inclusion and Customer-Centric Services	12 Hours

Concept and Dimensions of Financial Inclusion; Barriers to Financial Inclusion; Role of FinTech in Expanding Access to Financial Services; Digital Financial Inclusion in India; FinTech and Underserved Customers; Technology-Enabled Financial Services for MSMEs; Digital Credit Access; Customer-Centric Financial Services; Personalisation of Financial Services; Convenience, Accessibility and Service Quality; FinTech and Consumer Behaviour; Financial Literacy and Digital Financial Literacy; Innovation in Customer Service; FinTech and Small Businesses; FinTech and Inclusive Economic Development; Challenges of Digital Financial Inclusion.

MODULE 5	Strategic Transformation of Financial Services	12 Hours

Transformation of the Financial Services Industry; Changing Structure of Financial Intermediation; Changing Role of Banks and Financial Institutions; FinTech and Competitive Dynamics in Financial Services; Traditional Financial Institutions versus FinTech Firms; Collaboration between Banks and FinTech Firms; FinTech Partnerships and Strategic Alliances; Digital Transformation Strategies for Financial Institutions; Customer-Centric Transformation; Operational Transformation in Financial Services; Changing Sources of Competitive Advantage; Opportunities for Traditional Financial Institutions; Strategic Challenges of FinTech Adoption; Future of Banking and Financial Services; Emerging Business Trends in the FinTech Industry.

SKILL DEVELOPMENT ACTIVITIES

- Identify the major participants in the Indian FinTech ecosystem and explain their respective roles.
- Compare traditional banking and digital banking with respect to customer experience, accessibility, cost, convenience and service delivery.
- Analyse the value proposition, customer segment, revenue model and service delivery model of a selected FinTech company.
- Examine the evolution of digital payments in India and discuss the factors contributing to their adoption.
- Analyse how a FinTech-based financial service has improved access to financial services for underserved customers or MSMEs.
- Examine a real-world collaboration between a traditional financial institution and a FinTech company and discuss its strategic significance.

BOOKS FOR REFERENCES

1. Chishti, S., & Barberis, J. (2016). The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries. Wiley.
2. Arjunwadkar, P. Y. (2018). FinTech: The Technology Driving Disruption in the Financial Services Industry. CRC Press.
3. Hill, J. (2018). FinTech and the Remaking of Financial Institutions. Academic Press.
4. Mention, A. L. (2019). FinTech: The New Reality of Financial Services. Routledge.

5. Schueffel, P. (2016). Taming the Beast: A Scientific Definition of FinTech. Journal of Innovation Management, 4(4), 32–54.
6. Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: Current Research and Future Research Directions. Journal of Business Economics, 87, 537–580.

E-Resources

1. Reserve Bank of India (RBI) – Banking and Financial Services https://www.rbi.org.in/
2. National Payments Corporation of India (NPCI) – Digital Payments and Payment Systems https://www.npci.org.in/
3. International Monetary Fund (IMF) – Financial Technology and Digital Finance https://www.imf.org/
4. Bank for International Settlements (BIS) – Financial Innovation and Digital Finance https://www.bis.org/
5. World Bank – Digital Financial Services and Financial Inclusion https://www.worldbank.org/
6. NPTEL – Online Courses in Management, Banking and Financial Services https://nptel.ac.in/
7. SWAYAM – Online Courses in Banking, Finance and Management https://swayam.gov.in/

M.Com (Fintech)

Name of the Course : Python for Finance		
Course Code : 1.2	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course introduces Python programming for students with no prior programming background, with emphasis on financial and business applications. It covers programming fundamentals, data structures, file handling, NumPy, Pandas, and basic financial computations, providing the programming foundation required for advanced FinTech courses.

Course Objectives:

1. To understand the fundamentals of programming, computational thinking, and Python syntax.
2. To apply Python programming constructs and data structures to solve basic business and financial problems.
3. To develop skills in handling numerical and tabular data using NumPy and Pandas.
4. To apply Python to perform basic financial computations and process financial records.
5. To develop simple Python programs by integrating programming concepts for selected financial and business applications.

Course Outcomes:

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

CO1: Explain fundamental programming concepts and Python syntax applicable to business and finance.

CO2: Apply conditional statements, loops, functions, and data structures to solve basic financial and business problems.

CO3: Use NumPy and Pandas to organise, manipulate, and process numerical and tabular data.

CO4: Apply Python programming to perform basic financial computations and process financial records.

CO5: Develop and interpret Python programs for selected financial and business applications.

MODULE 1	**Python Programming Fundamentals**	**14 Hours**

Introduction to Programming and Computational Thinking; Problem Solving using Algorithms and Flowcharts; Introduction to Python; Features and Applications of Python in Business and Finance; Installation and Configuration of Python; Anaconda Distribution and Jupyter Notebook; Python Program Structure; Python Syntax; Variables and Constants; Data Types; Type Conversion; Operators and Expressions; Input and Output Statements; Conditional Statements – if, if-else and if-elif-else; Iterative Statements – for and while loops; Nested Conditions and Loops; Introduction to Functions; Defining and Calling Functions; Function Arguments and Return Values; Basic Debugging and Error Identification; Good Programming Practices; Simple Applications of Python in Business and Financial Computations.

MODULE 2	**Python Data Structures and File Handling**	**12 Hours**

Introduction to Python Data Structures; Strings and String Manipulation; Lists and List Operations; Tuples; Sets; Dictionaries and Dictionary Operations; Selection of Appropriate Data Structures; List Comprehensions – Basic Applications; Functions and Modules; Built-in and User-Defined Functions; Introduction to Exception Handling; File Handling – Creating, Reading and Writing Files; Working with Text Files; Working with CSV Files; Introduction to Excel File Handling; Organising Customer Records, Transaction Records, Ledger Information and Other Financial Data using Python Data Structures; Searching, Updating and Processing Business and Financial Records.

MODULE 3	NumPy and Pandas Fundamentals	12 Hours

Introduction to Python Libraries; Introduction to NumPy; Creating NumPy Arrays; One-Dimensional and Multidimensional Arrays; Array Indexing and Slicing; Mathematical and Arithmetic Operations on Arrays; Basic Aggregate Operations; Introduction to Pandas; Pandas Series and DataFrames; Creating Series and DataFrames; Importing Data from CSV and Excel Files; Viewing and Inspecting Data; Selecting Rows and Columns; Filtering Data; Sorting Data; Handling Missing Values; Identifying and Removing Duplicate Records; Adding and Modifying Columns; Basic Data Transformation; Grouping and Aggregation; Combining DataFrames – Basic Concepts; Processing Business and Financial Records using NumPy and Pandas.

MODULE 4	Python for Financial Computations	10 Hours

Application of Python to Basic Financial Computations; Simple Interest and Compound Interest; Present Value and Future Value; Annuity Calculations; Equated Monthly Instalment (EMI); Loan Repayment Calculations; Preparation of Basic Loan Amortisation Schedules; Depreciation Calculations – Straight Line Method and Written Down Value Method; Time Value of Money Calculations; Net Present Value (NPV); Internal Rate of Return (IRR) – Basic Computation; Investment Appraisal Calculations; Break-Even Point and Contribution Calculations; Basic Profit and Cost Calculations; Tax and Discount Calculations; Development of User-Defined Functions for Financial Computations.

MODULE 5	Applied Python Programming for Finance	12 Hours

Integration of Python Programming Concepts for Financial Applications; Development of Modular Python Programs; User-Defined Functions for Financial Problems; Working with Multiple Financial Records; Processing CSV and Excel-Based Financial Data; Application of Conditions, Loops, Functions and Data Structures to Financial Problems; Searching, Filtering and Summarising Financial Records; Automating Repetitive Financial Calculations; Error Handling in Financial Programs; Development of Simple Menu-Driven Financial Programs; Testing and Debugging Financial Programs; Interpretation of Program Output; Applications of Python in Routine Business and Financial Tasks.

SKILL DEVELOPMENT ACTIVITIES

- Develop Python programs using variables, operators, conditional statements and loops to solve basic business and financial problems.
- Create and manage customer, transaction or financial records using lists, tuples, sets and dictionaries.
- Import and process numerical and tabular financial records using NumPy and Pandas.
- Develop Python programs for selected financial computations such as interest, present value, future value, EMI, depreciation, NPV and break-even analysis.
- Develop a simple menu-driven Python program integrating conditions, loops, functions and data structures for selected financial computations.

BOOKS FOR REFERENCE

1. Downey, A. B. (2024). Think Python: How to Think Like a Computer Scientist (3rd ed.). O'Reilly Media.
2. McKinney, W. (2022). Python for Data Analysis: Data Wrangling with Pandas, NumPy, and Jupyter (3rd ed.). O'Reilly Media.
3. Hilpisch, Y. (2020). Python for Finance: Mastering Data-Driven Finance (2nd ed.). O'Reilly Media.
4. Lewinson, E. (2020). Python for Finance Cookbook. Packt Publishing.
5. VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media.
6. Ma, W. J. (2015). Mastering Python for Finance. Packt Publishing

E-Resources

1. Python Software Foundation – Python Documentation, **https://www.python.org/**
2. Python Official Tutorial **https://docs.python.org/3/tutorial/**
3. Jupyter Project Documentation **https://jupyter.org/**
4. NumPy Documentation **https://numpy.org/doc/**
5. Pandas Documentation **https://pandas.pydata.org/docs/**

Name of the Course : Python For Finance – Lab		
Course Code : 1.3	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
Viva-Voce : 30 **Practical :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This laboratory course provides hands-on training in Python programming for students with no prior programming background, with emphasis on financial and business applications. It develops practical skills in programming fundamentals, data structures, file handling, NumPy, Pandas, and basic financial computations. The course complements Python for Finance theory and provides the programming foundation required for advanced FinTech courses.

Course Objectives:

1. To develop Python programs using fundamental programming constructs for business and financial problems.
2. To apply Python data structures and file handling techniques to organise and process business and financial records.
3. To use NumPy and Pandas for handling numerical and tabular data.
4. To develop Python programs for basic financial computations.
5. To integrate Python programming concepts to develop simple applications for routine financial and business tasks.

Course Outcomes:

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

CO1: Develop Python programs using variables, operators, conditional statements, loops, and functions.

CO2: Organise and process business and financial records using Python data structures and file handling techniques.

CO3: Use NumPy and Pandas to manipulate and process numerical and tabular data.

CO4: Develop Python programs to perform basic financial computations.

CO5: Integrate programming constructs, data structures, files, and functions to develop simple Python applications for financial and business purposes.

MODULE 1	Python Programming Fundamentals Laboratory	12 Hours

Perform the following laboratory exercises:

1. Write a Python program to perform basic arithmetic and financial calculations using variables, operators, and input/output statements.
2. Write a Python program using conditional statements to determine loan eligibility based on given conditions.
3. Write a Python program using loops and functions to calculate Simple Interest and Compound Interest.

MODULE 2	Data Structures and File Handling Laboratory	12 Hours

Perform the following laboratory exercises:

4. Write a Python program using lists and dictionaries to store and display customer or transaction records.
5. Write a Python program to read and write financial records using a CSV file.
6. Write a Python program using exception handling to validate financial data entered by the user

MODULE 3	NumPy and Pandas Laboratory	12 Hours

7. Write a Python program using NumPy to perform basic arithmetic and aggregate operations on numerical data.
8. Write a Python program using Pandas to import and display financial data from a CSV or Excel file.
9. Write a Python program using Pandas to filter, sort, and group financial records.

MODULE 4	Financial Computations Laboratory	12 Hours

10. Write a Python program to calculate Present Value and Future Value.
11. Write a Python program to calculate EMI and total loan repayment.
12. Write a Python program to calculate NPV and depreciation.

MODULE 5	Applied Python for Finance Laboratory	12 Hours

13. Experiment 13: Write a Python program to search financial records based on a specified field.
14. Experiment 14: Write a Python program using functions to calculate Simple Interest, Compound Interest, Present Value, and Future Value.
15. Experiment 15: Write a Python program to import financial records from a CSV file and generate a summary using Pandas.

SKILL DEVELOPMENT ACTIVITIES

- Develop and train basic machine learning models for predicting stock prices, credit risk, or customer defaults using financial datasets.
- Perform data preprocessing, feature engineering, and exploratory data analysis using Python libraries such as Pandas, NumPy, and Scikit-learn.
- Design an AI-based fraud detection model using transaction datasets and evaluate its performance.
- Analyze customer segmentation and loan approval prediction using classification algorithms. Build predictive models for financial forecasting using regression and time-series techniques

BOOKS FOR REFERENCE

1. Hilpisch, Y. (2020). *Python for Finance: Mastering Data-Driven Finance* (2nd ed.). O'Reilly Media.
2. McKinney, W. (2022). *Python for Data Analysis: Data Wrangling with Pandas, NumPy, and Jupyter* (3rd ed.). O'Reilly Media.
3. VanderPlas, J. (2016). *Python Data Science Handbook*. O'Reilly Media.
4. Lewinson, E. (2024). *Python for Finance Cookbook* (2nd ed.). Packt Publishing.
5. Downey, A. B. (2024). *Think Python: How to Think Like a Computer Scientist* (3rd ed.). O'Reilly Media.
6. Ma Weiming, J. (2015). *Mastering Python for Finance*. Packt Publishing.
7. Conlan, C. (2024). *Python for Algorithmic Trading Cookbook*. Packt Publishing.
8. Bonaccorso, G. (2018). *Machine Learning for Finance*. Packt Publishing.

Practical Examination

The practical examination shall assess the student's ability to independently apply Python.
The student may be provided with a **structured financial dataset and a practical problem** based on any of the 15 prescribed experiments.

Examination Pattern	
Component	**Marks**
Program Execution	50
Interpretation of Results	20
Practical Total	**70**
Viva Voce	**30**
Total	**100**

M.Com (Fintech)

Name of the Course : Corporate Finance		
Course Code : 1.4	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course provides an in-depth exploration of advanced corporate finance concepts and practices. It is designed to enhance students' understanding of financial decision-making within a corporate setting, focusing on value maximization, risk management, and strategic financial planning. The course emphasizes practical applications through case studies and real-world examples to prepare students for dynamic roles in financial management.

Course Objectives:

1. To equip students with advanced knowledge of corporate finance theories and practices.
2. To develop analytical skills for evaluating investment opportunities and capital budgeting decisions.
3. To understand the implications of capital structure and financing choices on firm value.
4. To explore risk management techniques and their application in corporate finance.
5. To equip students with practical knowledge of corporate finance to navigate real-world financial challenges.

Course Outcomes:

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

CO1: Critically evaluate advanced corporate finance theories and their applications in real-world scenarios.
CO2: Conduct comprehensive capital budgeting analyses using various techniques.
CO3: Assess the impact of different capital structures on a firm's cost of capital and overall value.
CO4: Manage corporate finance functions effectively in various organizational contexts.
CO5: Critically evaluate various dividend policies and understand their impact on shareholder wealth
CO6: Develop working capital management strategies to optimize a company's liquidity, cash flow, and operational efficiency.

MODULE 1	Financing Decisions	12 Hours

Introduction: Financial Management: Meaning and scope- objectives of Financial Management- role and functions of finance managers. Interface of Financial Management with other functional areas, Factors influencing Financial Decisions. Capital Structure Planning and Policy; Optimal Capital Structure: Meaning and Concept, Trade-Off-Theory v/s Pecking Order Theory, EBIT – EPS Approach – Concept & Problems. Introduction to Capital Structure Theories: Net Income Approach, Net Operating Income Approach, The Traditional approach, Modigliani & Miller Approach - Concept & Problems.

MODULE 2	Long Term Investment Decisions	12 Hours

Introduction to Investment Decisions: Meaning, Need and Factors, Efficient Investment Analysis, Types of investment decisions. Introduction to Capital Budgeting Decisions – Meaning, Features, Process and Factors, Capital Budgeting Techniques: Traditional and Modern Techniques, PBP,ARR, NPV v/s IRR, Incremental IRR, Modified Internal Rate of Return (MIRR) – Concept, Evaluation Criteria & Problems, Project Selection under Capital Rationing: Meaning, Types, Pros & Cons, Problems on Divisible & Indivisible Projects, Multi- Period Capital Rationing, Capital Budgeting under Inflationary Conditions.

MODULE 3	Risk Analysis in Capital Budget	12 Hours

Risk Analysis in Capital Budgeting – Meaning, Analysis of Risk and Uncertainty, Sources and Perspectives of Risk, Measurement of Risk, Nature of Risk in Capital Budgeting Decisions, Techniques for Risk Analysis: Risk Adjusted Discount Rate, Certainty Equivalent Method, Probability Method, Sensitivity Analysis, Scenario Analysis, Simulation Analysis, Hiller Model, Break-Even Analysis, Corporate Risk Analysis, Decision Tree Analysis – Sequential Investment Decisions, Market Risk Analysis – Concept & Problems, Backward Induction Method, Utility Theory and Capital Budgeting.

MODULE 4	Corporate Restructuring	12 Hours

Introduction to Corporate Restructuring: Mergers, Acquisitions, Takeovers, Spinoff, Synergies, Strategic Alliance, Joint Venture, Leveraged Buyouts, Management Buyouts (MBO) & Buy-in (MBI), Franchising, Intellectual Property Rights (IPRs), Sell-off, Demerger, Disinvestment v/s Divestment, Slump Sale, Reverse Merger, Equity Carveout – Concept & Types. Valuation under M&A: Discounted Cash Flow Method (DCF), Price-Earnings Ratio (P/E Ratio), EPS Approach, Enterprise-Value-to-Sales Ratio (EV/Sales), Replacement Cost Method – Concept & Problems.

MODULE 5	Dividend & Working Capital Decisions	12 Hours

Introduction to Dividend Decisions, Meaning & Definition, Forms of Dividend, Types of Dividend Policy, Significance of Dividend, Impact of Dividend Policy on Company, Factors affecting Dividend Policy, Dividend Decision Theories – Walter's Model, Gordon's Model, MM Theory – Concept, Assumptions, Formula, Criticisms & Problems.

Introduction to Working Capital, Meaning & Definition, Types of Working Capital, Significance of Adequate Working Capital – Evils of Excess or Inadequate Working Capital – Determinants of Working Capital – Sources of Working Capital, Techniques for managing Working Capital – Concept & Problems.

SKILL DEVELOPMENT ACTIVITIES

- Analyze a capital investment proposal for a mock company and make a recommendation using NPV, IRR, and Payback Period.
- An spread sheet-based analysis showing various project outcomes under different scenarios.
- Simulate a negotiation between acquiring and target companies, discussing terms such as valuation, financing, and integration.
- Analyze real-life cases of companies' financing decisions to understand capital structure choices and factors influencing financial decisions.
- Evaluate two competing projects using capital budgeting techniques and recommend the optimal choice based on investment analysis.
- Research and present on the impact of strategic alliances or joint ventures, assessing potential advantages and risks.
- Simulate different dividend policies using financial software to observe the impact on stock prices and shareholder value.

BOOKS FOR REFERENCE

1. Financial Management by I.M. Pandey, Vikas Publishing House
2. Financial Management: Theory and Practice, by Prasanna Chandra, McGraw Hill Education
3. Corporate Finance by Vishwanath S.R., Sage Publications
4. Financial Management and Policy by Van Horne and James C. Wachowicz, Pearson Education India
5. Financial Management by Khan M.Y. and Jain P.K., McGraw Hill Education
6. Fundamentals of Financial Management by Sharan Vyuptakesh, Pearson Education India
7. Strategic Financial Management by Ravi M. Kishore, Taxmann Publications

8. Financial Management Principles and Practice by Sudhindra Bhat, Excel Books India
9. Financial Management and Policy by Bhabatosh Banerjee, PHI Learning Pvt. Ltd.
10. Principles of Financial Management by S.N. Maheshwari, ultan Chand & Sons
11. Principles of Corporate Finance by Richard A. Brealey, Stewart C. Myers, and Franklin Allen, McGraw Hill Education
12. Corporate Finance by Jonathan Berk and Peter DeMarzo, Pearson
13. Financial Management: Theory and Practice by Eugene F. Brigham and Michael C. Ehrhardt, Cengage Learning
14. Fundamentals of Corporate Finance by Stephen A. Ross, Randolph W. Westerfield, and Bradford D. Jordan, McGraw Hill Education
15. Corporate Finance: A Focused Approach by Michael C. Ehrhardt and Eugene F. Brigham, Cengage Learning

E-Resources

1. Swayam, Financial Management For Managers By Prof. Anil K. Sharma, IIT Roorkee
2. Swayam, Financial Management By CA Amita Bissa, Jai Narain Vyas University, Jodhpur
3. Swayam, Fundamentals of Financial Management By Dr. Rupali Bipin Sheth, Savitribai Phule Pune University, Pune
4. NPTEL, Financial Management for Managers by Prof. Anil K. Sharma department of management, IIT Roorkee
5. Coursera, *Corporate Finance Essentials* by the University of Illinois
6. edX, *Introduction to Corporate Finance* by Columbia University

Name of the Course : Governance and Global Responsibility		
Course Code : 1.5	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This comprehensive course **Governance and Global Responsibility** delves into the principles, frameworks, and practices that shape responsible business conduct in the global marketplace. It encompasses five key modules designed to equip students with a robust understanding of governance models, legal and ethical challenges, risk management, and sustainability initiatives. The course explores the dynamics of corporate social responsibility (CSR) and ethical leadership, emphasizing the integration of environmental, social, and governance (ESG) factors into business strategies.

Course Objectives:

1. To have a deeper understanding of governance principles and their application in global business contexts.
2. To identify, evaluate, and navigate the legal and ethical challenges faced by international businesses.
3. To implement effective corporate governance structures and risk management strategies in global operations.
4. To cultivate ethical leadership and corporate social responsibility.
5. To promote corporate sustainability and environmental governance.

Course Outcomes:

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

CO1: Understand foundational concepts of governance and global responsibility.
CO2: Evaluate the role of corporate social responsibility (CSR) and sustainability in international business.
CO3: Analyse legal and ethical issues impacting international business operations.
CO4: Recognize global standards and frameworks such as ISO and the United Nations' Sustainable Development Goals (SDGs).
CO5: Explore governance challenges and opportunities in emerging markets.

MODULE 1	**Foundations of Governance and Global Responsibility**	**12 Hours**

Governance: Definition and importance in global business. Key principles of governance: transparency, accountability, fairness. Governance models: Centralized vs. decentralized systems and Role of governance in multinational corporations (MNCs). Corporate Social Responsibility (CSR) and Sustainability: Dimensions of CSR: Economic, environmental, social. The Triple Bottom Line: Profit, People, Planet and sustainability in the context of globalization.

MODULE 2	**Legal and Ethical Frameworks in International Business**	**12 Hours**

Legal Issues in International Business: Global legal frameworks governing international trade, Key legal challenges faced by MNCs in various jurisdictions. Ethical Issues in Global Business: Common ethical dilemmas faced by multinational corporations (e.g., bribery, corruption, labour standards) and International ethical guidelines (e.g., UN Global Compact principles). Global Standards and Frameworks: ISO standards (ISO 26000 on CSR, ISO 14001 on environmental management), United Nations' Sustainable Development Goals (SDGs) and their application in business.

MODULE 3	**Corporate Governance and Risk Management in Global Operations**	**14 Hours**

Corporate Governance Structures (CGS): Importance and features of corporate governance in international trade, Governance models and the roles/responsibilities of boards in global firms. Cross-Border Governance Challenges: Shareholder and stakeholder management, Global regulatory

frameworks for multinational corporations (e.g., IFRS, Basel III). Risk Management in International Business: Types of risks in global operations (political, financial, cultural), Risk management frameworks and mitigation strategies. Compliance and Accountability: The role of auditing, anti-corruption laws, and transparency in global governance, Key regulatory bodies (e.g.,FCPA, OECD).

MODULE 4	Global Environmental Governance and Sustainable Development	12 Hours

Environmental Governance: Scope of environmental governance and international environmental agreements (e.g., Paris Agreement, Kyoto Protocol). Corporate Role in Environmental Policy: Cross-border environmental regulations. Climate change policies and their impact on global supply chains. Sustainability Initiatives in Global Firms: Renewable energy, carbon markets, and the green economy. Circular economy and sustainable resource management. Corporate Environmental Responsibility (CER): Best practices for CER in global markets. Corporate policies on waste, water, and biodiversity management.

MODULE 5	Ethical and Social Responsibility in Global Business	10 Hours

Ethical Frameworks in Global Business: Cultural relativism vs. universal ethics, Corruption, bribery, and fraud in international business. Corporate Social Responsibility (CSR) in Global Supply Chains: Labor rights and ethical sourcing. Environmental sustainability in supply chain management. Human Rights and Business: International human rights frameworks (e.g., UN Guiding Principles on Business and Human Rights), Corporate responsibility to protect human rights. Ethical Leadership: Defining ethical leadership in a global context, promoting ethical decision- making and shaping corporate culture.

SKILL DEVELOPMENT ACTIVITIES

- Case Studies
  - ✓ IKEA's sustainability model.
  - ✓ Patagonia's environmental responsibility strategy and Tesla's renewable energy business model.
  - ✓ Apple and Foxconn: Ethical issues in global supply chains.
  - ✓ The Rana Plaza Collapse: Corporate responsibility in the fashion industry.
- Role-Playing: Role-play scenarios of governance in centralized vs. decentralized systems.
- Sustainability Initiatives: Create sustainability initiatives for hypothetical global firms.
- Policy Reviews: Review and discuss international ethical guidelines and ISO standards.
- Research Projects: Assign projects on the role of governance in multinational corporations.

BOOKS FOR REFERENCE

1. Goel, S. (2024). Corporate governance: Theory and practice. Wiley India.
2. du Plessis, J. J., Hargovan, A., & Nosworthy, B. (2024). Principles of contemporary corporate governance. Cambridge University Press.
3. De Cruz, A. F. (2024). Business ethics: An institutional governance approach to ethical decision making. Palgrave Macmillan.
4. Magnan, M., & Michelon, G. (Eds.). (2024). Handbook on corporate governance and corporate social responsibility. Edward Elgar Publishing.
5. Das Gupta, A., Kiranmai, J., & Mishra, R. K. (Eds.). (2024). Corporate social responsibility and globalization. Cambridge Scholars Publishing.
6. Reddy, B. A. K., Nirmala, K., Rani, N. A., & Fernandes, S. (2025). Business ethics and corporate governance (4th ed.). Himalaya Publishing House.
7. Ghillyer, A. W. (2025). Business ethics now (6th ed.). McGraw Hill.
8. Morrison, J. (2023). Business ethics: New challenges in a globalised world. Bloomsbury Academic.
9. Cannon, T. (2013). Corporate responsibility: Governance, compliance and ethics in a sustainable environment (2nd ed.). Pearson.
10. Chandler, D. (2016). Strategic corporate social responsibility: Sustainable value creation (4th ed.).

SAGE Publications.
E-Resources 1. SWAYAM (NPTEL) – Artificial Intelligence for Economics ***(IIT Kharagpur)*** 2. SWAYAM Plus (IIT Madras) – AI/ML Using Python 3. Coursera – Machine Learning Specialization ***(DeepLearning.AI & Stanford University)*** 4. edX – Artificial Intelligence in Finance ***(offered by leading universities/institutions)***

Name of the Course : Global Business Environment			
Course Code : 1.6		**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30	**SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

The **Global Business Environment** course provides an in-depth understanding of the various factors that influence global business operations. It explores the political, economic, social, technological, environmental, and legal (PESTEL) factors that shape the international business landscape. The course aims to equip students with analytical skills to assess global opportunities and challenges while fostering a holistic understanding of the interconnectedness of markets in the 21st century.

Course Objectives:

1. To analyze the components of the global business environment and their interrelationships.
2. To evaluate the impact of political, economic, and cultural factors on international business operations.
3. To assess the implications of technological advancements and globalization on business strategies.
4. To develop strategic responses to the dynamic global business landscape.
5. To understand the role of ethics and sustainability in global business practices

Course Outcomes:

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

CO1: Demonstrate a comprehensive understanding of the global business environment and its influencing factors.

CO2: Analyze and evaluate the effects of economic, political, and socio-cultural factors on global business strategies.

CO3: Assess the impact of technological changes and globalization on international business operations.

CO4: Formulate strategic recommendations for navigating challenges in the global business environment.

MODULE 1	Introduction to the Global Business Environment	10 Hours

Defining the Global Business Environment - Concept and importance of the global business environment - Historical evolution of International Business and Globalization in Bharat. Approaches to International Business. **Components of the Global Business Environment -** Political, Economic, Socio-cultural, Technological Environment and Legal factors - Interconnectivity of these components in shaping business operations. The role of international organizations (WTO, IMF and World Bank), EXIM Bank initiatives in shaping the global landscape of Business in Bharat (Objective, Structure and functions).

MODULE 2	Political and Legal Environment	14 Hours

Political Systems and their Impact on Business - Types of political systems: Democracy, authoritarianism and their effects on business - Political risk assessment and management strategies. **Legal Environment -** Key legal frameworks governing international trade - Intellectual property rights and their importance. **Trade Policies–** Tariffs, Quotas, Subsidies, Embargoes. **Agreements types-** Bilateral, multilateral and regional. **Regional Agreements and Trade Blocs:** North American Free Trade Agreement (NAFTA), European Union (EU) and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), Association of Southeast Asian Nations (ASEAN) and Regional Comprehensive Economic Partnership (RCEP). The organization of the Petroleum Exporting countries (OPEC). Impact of Geopolitics on global business.

MODULE 3	Economic Environment	14 Hours

Global Economic Systems - Overview of global economic systems: capitalism, socialism, and mixed economies - Key economic indicators and their significance (GDP, inflation, unemployment).

International Trade Theories – Mercantilism, Neo-Mercantilism, Factor mobility theory, Theory of Absolute advantage, Theory of Comparative advantage, Product life cycle theory, New trade theory, Theory of country size, factors proportion theory and Porters Diamond model. **Economic Challenges and Opportunities -** Impact of economic cycles on business operations - Strategies for navigating economic downturns and crises. **Economic and Defence Agreements:** NATO (North Atlantic Treaty Organization), AUKUS, BRICS and QUAD- Role and Its relevance. Impact of Geo-economics on global business.

MODULE 4	Socio-Cultural and Technological Environment	10 Hours

Socio-Cultural Dimensions in International Business – Demographic and population trends, social norms and values, Human Development Index, Understanding Hofstede's cultural dimensions theory - Impact of culture on communication, negotiation, and business practices.

Technological Advancements and Innovation - Role of technology in transforming global business operations - E-commerce, digital marketing, and the rise of fin-tech. Ethical and legal issues pertaining to Technology.

MODULE 5	Strategies for Operating in the Global Environment	12 Hours

Strategic Planning in the Global Context - Tools for global strategic planning (SWOT analysis, scenario planning) - Developing competitive strategies in diverse markets. **Risk Management and Contingency Planning -** Identifying and mitigating risks in international operations - Importance of agility and adaptability in global strategies. **Future Trends in Global Business -** Emerging trends: digital transformation, sustainability (ESG practices) and ethical business - Preparing for future challenges in the global landscape. Climate change and global warming - World Economy Impacts.

SKILL DEVELOPMENT ACTIVITIES

- Case Study
  - Impact of globalization on a specific industry.
  - Analysing the effects of a political change in a country on business operations.
  - The impact of a global economic crisis on a specific industry.
  - Innovation strategies of a leading global firm.
  - Successful global strategies of a multinational corporation.
- Group Discussion
  - Future challenges for businesses in a rapidly changing global environment
  - Pros and cons of globalization for emerging markets.
- Simulation: Assessing political risk for a multinational company entering a new market.
- Group Exercise: Analysing economic indicators for decision-making in business.
- Group Project: Assessing cultural challenges in a global business scenario.

BOOKS FOR REFERENCE

1. "Global Business Environment: A Strategic Perspective" by David W. Conklin
2. "International Business: Competing in the Global Marketplace" by Charles W. L. Hill
3. "The Cultural Dimension of International Business" by Gary P. Ferraro and Elizabeth K. Briody
4. "Globalization: A Very Short Introduction" by Manfred B. Steger
5. "Understanding the Global Economy" by Robert E. Baldwin and Richard E. Baldwin
6. "The Business Environment: A Global Perspective" by Paul W. Beamish and Christopher A. Bartlett
7. "International Economics" by Paul Krugman and Maurice Obstfeld
8. "Sustainable Business: Concepts, Methodologies, Tools, and Applications" by Information Resources Management Association

9. "Business in the Contemporary World" by H. A. S. Pahlavi

10. "Global Business Strategy: Multinational Corporations Venturing into Emerging Markets" by A. G. K. Rao

11. Morrison, J.(2023e) The global business environment: Sustainability in the Balance. 6th edition. London: Palgrave Macmillan.E-Resources: https://www.imf.org/en/Publications/W

E-Resources

1. **Coursera:** Offers various courses on global business, economics, and international trade from leading universities. Coursera Global Business Courses
2. edX: Provides access to courses from highly reputed global institutions like MIT, Harvard, and Wharton. Link: edX Global Business Environment
3. Harvard Business Review (HBR): A reliable source for articles, case studies, and insights into global business. Link: Harvard Business Review
4. MIT OpenCourseWare: Free access to course materials from MIT's business school. Link: MIT OpenCourseWare: Global Business
5. World Bank eLibrary: A vast repository of global research reports, articles, and data. Link: World Bank eLibrary
6. OECD iLibrary: This resource offers comprehensive reports and data on international trade, global economic policies, and regional development. Link: OECD iLibrary
7. UNCTAD (United Nations Conference on Trade and Development): The official UN resource on global trade, investment, and development. Link: UNCTAD Publications
8. WTO (World Trade Organization): A key resource for understanding international trade laws, policies, and agreements. Link: **WTO e-Library**
9. IMF (International Monetary Fund) eLibrary: Offers access to a wide range of publications, reports, and working papers on global financial stability, international trade, and macroeconomic trends. Link: IMF eLibrary
10. Global EDGE: Created by Michigan State University, this platform offers extensive resources on global business. Link: Global EDGE.

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Name of the Course : Business Communication and Professional Skills		
Course Code : 1.7	**Course Credits:** 2	**No. of Hours per week:** 3 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 45 Hrs.

Course Description:

Business Communication and Professional Skills develops effective communication competencies required in professional and business environments. It focuses on verbal, non-verbal, written, and digital communication skills. Students learn business correspondence, presentations, group discussions, meetings, negotiations, and interview skills. The course enhances interpersonal skills, teamwork, leadership, professional etiquette, and workplace confidence. Practical activities help students communicate clearly, professionally, and effectively in diverse organizational situations.

Course Objectives:

1. To develop effective interpersonal communication skills for building and maintaining professional relationships in the workplace.
2. To write clear, concise, and professional business documents, including emails, memos, letters, and reports.
3. To improve oral communication skills, including active listening, public speaking, and delivering persuasive presentations.

Course Outcomes:

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

CO1: Demonstrate effective verbal, non-verbal, and written communication skills in academic and professional contexts.

CO2: Apply professional communication techniques in presentations, group discussions, interviews, meetings, and workplace interactions.

CO3: Develop professional skills such as teamwork, leadership, time management, problem-solving, and interpersonal effectiveness.

CO4: Prepare professional documents and communicate confidently using appropriate etiquette, digital tools, and workplace communication practices.

MODULE 1	**Introduction to Business Communication**	**10 Hours**

Meaning and Introduction, Importance of communication, The nature of communication, The process of communication and Communication principles, Using communication networks, Formal communication network, Informal communication networks. Types of communication- Verbal, Non-verbal, Written communication, Visual communication, Business Communications- Meaning, Functions, Key Stakeholders.

MODULE 2	**Listening Skills and Reading Skills**	**05 Hours**

Listening Skills, Introduction Listening v/s hearing, Listening styles Techniques for effective listening and note taking. (Activity Based). Reading Skills – Introduction, Benefits of effective reading, Basic steps to effective reading, Methods of reading, (Activity Based).

MODULE 3	**Verbal and Written communication skills**	**10 Hours**

Verbal Communication, Introduction, Speaking skills — Pronunciation, Enunciation, Vocabulary, Fluency and common errors. Types-Face to face Communication — introducing yourself/others, engaging in effective/meaningful conversations, Group Discussions and personal interviews — etiquette and mannerisms. Team Meetings and Conferences — Preparing powerpoint slides, asking concise questions, Reflecting the purpose and comments of others, Focus on the audience. Public speaking — art of persuasion, storytelling techniques, delivering different types of speeches, Telephonic communication – etiquette, beginning and ending a conversation Written Communication – Introduction, The Writing Process, Effective Writing Strategies, Different Modes of Writing — Drafting Resume and covering letter,

E-mails, Memorandums, Circulars, Persuasive Messages, and Business Proposals. Writing Summaries of meetings, conferences, and speeches

MODULE 4	Interpersonal communication	12 Hours

Introduction to Intrapersonal and Interpersonal Communication. Intrapersonal Communication — concept of the self & communicating with self Interpersonal Communication — Meaning, elements and types Building positive interpersonal relationships. Communicating with teams and giving praise. Dealing with criticism — Offering constructive criticism and responding to criticism. Managing conflicts — Approaches to conflicts and handling conflicts. Negotiating skills — Negotiation styles, outcomes and usage of appropriate negotiating style. Problem-solving communication — Systematic problem-solving, stages in group problem solving and decision-making methods. Building positive organizational culture through internal communications. Effective communications in groups and teams — recognise both group and personal goals, promote desirable norms, promoting optimal level of cohesiveness, avoiding excessive conformity and encourage creativity Intercultural and International Communication. Crisis communication — Meaning, Role, Types & Effective crisis communication

MODULE 5	Contemporary Digital Communication Tools	08 Hours

Platforms : Basic Virtual Platforms — Zoom, Google Meet, Cisco WebEx, MS Teams. Instant messaging Chatbots, Web calling Social Media. Introduction to Social Media websites. Social media ethics and etiquette. Effective ways of using social media

SKILL DEVELOPMENT ACTIVITIES

- Conduct group discussions and role plays on workplace situations such as meetings, negotiations, and conflict resolution.
- Draft professional emails, business letters, resumes, and cover letters for different professional situations.
- Conduct mock interviews to develop interview skills, confidence, body language, and professional etiquette.
- Participate in team-building and leadership activities to enhance interpersonal, decision-making, and problem-solving skills.
- Practice telephone, video-conferencing, and digital communication etiquette through simulated workplace situations.
- Prepare and present a business pitch or elevator pitch to develop persuasive communication skills.

BOOKS FOR REFERENCE

1. Bovée, C. L., & Thill, J. V. (2025). Business communication today (16th ed.). Pearson.
2. Guffey, M. E., & Loewy, D. (2026). Essentials of business communication (13th ed.). Cengage.
3. Locker, K. O., Mackiewicz, J., & Aune, J. E. (2025). Business communication. McGraw Hill. The publisher currently lists the 2025 release as the current version.
4. Guffey, M. E., Du-Babcock, B., McLain, R., & Loewy, D. (2025). Essentials of business communication (4th Asian ed.). Cengage.
5. Bovee, C. L., & Thill, J. V. (2026). Business communication today: Global edition (16th ed.). Pearson Education Limited.

E-Resources

1. SWAYAM – Business English Communication, IIT Madras (NPTEL)
2. SWAYAM – Soft Skills, IIT Roorkee (NPTEL)
3. NPTEL – International Business Communication, IIT Kharagpur
4. NPTEL – Communication Skills
5. OpenStax – Writing Guide: Business and Law

Name of the Course : Financial Analytics using Python			
Course Code : 2.1		**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30	**SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60Hrs.

Course Description

This course focuses on the application of Python for analysing financial and business data. Building upon the Python programming knowledge acquired in Semester I, the course applies Python-based analytical techniques to financial statements, banking and credit data, investments, business performance, and financial decision-making.

Course Objectives

1. To apply Python as a technical tool for analysing financial and business data.
2. To evaluate financial statements and banking data using Python-based analytical techniques.
3. To analyse investment returns, risk, and performance using Python.
4. To evaluate business performance using financial and operational datasets.
5. To apply Python-generated analytical results to support financial and managerial decision-making.

Course Outcomes:

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

CO1: Apply Python to acquire, prepare, process, and analyse financial data.

CO2: Evaluate financial statements, banking, and credit data using Python-based analytical techniques.

CO3: Analyse investment returns, risk, volatility, and portfolio performance using Python.

CO4: Evaluate business performance using financial and operational datasets through Python.

CO5: Interpret Python-generated analytical outputs and apply them to evidence-based financial and managerial decisions.

MODULE 1	**Python-Based Financial Statement Analytics**	**14 Hours**

Introduction to Financial Analytics; Role of Python in Financial Analytics; Sources and Formats of Financial Data; Structure of Financial Statements; Acquisition and Preparation of Financial Data using Python; Cleaning Financial Data using Python; Horizontal Analysis using Python; Vertical Analysis using Python; Common-Size Financial Statements; Python-Based Calculation of Financial Ratios; Liquidity Ratios; Profitability Ratios; Solvency Ratios; Efficiency Ratios; Market Ratios; Comparative Financial Statement Analysis; Trend Analysis; Interpretation of Python-Generated Financial Results; Applications of Financial Statement Analytics in Business Decision-Making.

MODULE 2	**Python-Based Banking and Credit Analytics**	**12 Hours**

Introduction to Banking Analytics; Sources and Structure of Banking Data; Banking Key Performance Indicators; Customer Account Analytics; Deposit Analytics; Loan Portfolio Analytics; Credit Exposure Analysis; Credit Risk Indicators; Non-Performing Asset (NPA) Analysis; Customer Profiling using Descriptive Financial Variables; Loan Repayment Behaviour Analysis; Default Rate Analysis; Comparative Banking Performance Analysis using Python; Interpretation of Banking and Credit Analytical Outputs; Applications of Python-Based Analytics in Banking and Financial Services.

MODULE 3	**Python-Based Investment Analytics**	**12 Hours**

Introduction to Investment Analytics; Financial Market Data and Investment Datasets; Acquisition and Processing of Security Data using Python; Calculation of Security Returns; Daily, Monthly and Annual Returns; Portfolio Return Calculation; Risk and Return Analysis; Measurement of Volatility; Comparative Risk Analysis of Individual Securities and Simple Portfolios; Benchmark Comparison; Portfolio Performance Evaluation using Sharpe Ratio, Treynor Ratio and Jensen's Alpha; Comparative Investment Performance Analysis; Multi-Security Analysis using Python; Interpretation of Python-Generated Investment Analytics; Applications of Investment Analytics in Wealth

Management and FinTech.

MODULE 4	Python-Based Business Performance Analytics	12 Hours

Business Performance Analytics; Business and Financial Datasets; Revenue Analytics; Profitability Analytics; Cost Analytics; Budgetary and Actual Performance Analysis; Variance Analytics; Break-Even and Cost–Volume–Profit Analytics; Customer Profitability Analysis; Segment Performance Analysis; Key Performance Indicators (KPIs); Comparative Business Performance Analysis; Performance Evaluation using Financial Data; Interpretation of Python-generated Business Analytics; Applications of Business Analytics in Managerial Decision-Making.

MODULE 5	Python-Based Financial Decision Analytics	10 Hours

Role of Analytics in Financial Decision-Making; Python-Based Financial Decision Analysis; Financial KPI-Based Decision-Making; Performance Ranking and Comparative Evaluation using Python; Scenario Analysis; What-If Analysis; Evaluation of Financial Alternatives; Development of Decision Rules based on Analytical Results; Comparison of Alternative Financial Outcomes; Interpretation of Python-Generated Analytical Outputs; Formulation of Financial and Managerial Recommendations; Evidence-Based Financial Decision-Making; Ethical Considerations in Financial Analytics; Applications of Financial Decision Analytics in Business and Financial Services.

SKILL DEVELOPMENT ACTIVITIES

- Analyse the financial statements of a selected listed company using Python and interpret its financial performance.
- Analyse a banking dataset containing customer, deposit, loan, or credit information using Python and identify significant financial patterns.
- Compare the return, risk, volatility, and performance of selected securities or simple portfolios using Python.
- Evaluate revenue, cost, profitability, budgetary performance, and selected KPIs of a business using Python.
- Apply Python-based scenario or what-if analysis to evaluate alternative financial decisions and formulate appropriate recommendations.

BOOKS FOR REFERENCE

1. Hilpisch, Y. (2020). Python for Finance: Mastering Data-Driven Finance (2nd ed.). O'Reilly Media.
2. Lewinson, E. (2020). Python for Finance Cookbook. Packt Publishing.
3. McKinney, W. (2022). Python for Data Analysis: Data Wrangling with Pandas, NumPy, and Jupyter (3rd ed.). O'Reilly Media.
4. Hilpisch, Y. (2018). Python for Finance: Analyze Big Financial Data (2nd ed.). O'Reilly Media.
5. Ma, W. J. (2019). Mastering Python for Finance (2nd ed.). Packt Publishing.

E-Resources

1. SWAYAM / NPTEL – Data Analytics with Python
   https://onlinecourses.nptel.ac.in/noc26_cs86/preview
2. SWAYAM Plus – IIT Madras
   https://swayam-plus.swayam2.ac.in/
3. Coursera – Python and Statistics for Financial Analysis
   https://www.coursera.org/learn/python-statistics-financial-analysis
4. edX – Data Analysis Courses
   https://www.edx.org/learn/data-analysis
5. Kaggle Learn – Pandas
   https://www.kaggle.com/learn/pandas
6. Reserve Bank of India – Database on Indian Economy (DBIE)
   https://data.rbi.org.in/

Name of the Course : Financial Analytics using Python-Lab		
Course Code : 2.2	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
Viva-Voce : 30 **Practical :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60Hrs.

Course Description

This laboratory course provides hands-on experience in applying Python to financial and business analytics. Students work with financial datasets to perform financial statement analysis, banking and credit analysis, investment analysis, and business performance analysis. The laboratory emphasizes data preparation, analytical computation, interpretation of results, and financial decision-making using Python.

The laboratory shall be conducted using Python as the primary analytical tool. Each experiment shall involve data preparation, Python-based computation, execution of the program, analysis of the output, and interpretation of the financial results.

Course Objectives

1. To apply Python to analyse financial and business datasets.
2. To perform financial statement, banking, credit, investment, and business performance analysis using Python.
3. To develop practical skills in preparing and processing financial datasets.
4. To interpret Python-generated analytical results for financial decision-making.
5. To apply financial analytics techniques to practical problems in banking, investment, business, and FinTech.

Course Outcomes

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

CO1: Prepare and process financial datasets using Python.
CO2: Perform financial statement and banking analytics using Python.
CO3: Calculate and analyse investment returns, risk, and portfolio performance using Python.
CO4: Evaluate business performance using Python-based financial analytics.
CO5: Interpret analytical outputs and use them to support financial decisions.

MODULE 1	**Python-Based Financial Statement Analytics**	**14 Hours**

Experiment 1: Write a program using Python to compare Revenue, Net Profit, Total Assets, and Shareholders' Equity of selected companies.
Experiment 2: Write a program using Python to perform horizontal, vertical, and common-size financial statement analysis.
Experiment 3: Write a program using Python to calculate and compare liquidity, profitability, solvency, and efficiency ratios.

MODULE 2	**Python-Based Banking and Credit Analytics**	**12 Hours**

Experiment 4: Write a program using Python to analyse customer deposits and average deposit balances.
Experiment 5: Write a program using Python to analyse loan outstanding, NPAs, and Gross NPA Ratio.
Experiment 6: Write a program using Python to calculate and compare loan default rates across different loan categories.

MODULE 3	**Python-Based Investment Analytics**	**12 Hours**

Experiment 7: Write a program using Python to calculate and compare daily returns and cumulative returns of securities.
Experiment 8: Write a program using Python to calculate and compare standard deviation and annualised volatility of securities.
Experiment 9: Write a program using Python to calculate Sharpe Ratio, Treynor Ratio, and Jensen's

Alpha.

MODULE 4	Python-Based Business Performance Analytics	12 Hours

Experiment 10: Write a program using Python to analyse revenue, cost, profit, and profit margin.
Experiment 11: Write a program using Python to calculate and analyse budget and actual variances.
Experiment 12: Write a program using Python to calculate Contribution, P/V Ratio, Break-Even Point, and Margin of Safety.

MODULE 5	Python-Based Financial Decision Support	10 Hours

Experiment 13: Write a program using Python to rank companies based on Net Profit Margin, Return on Equity, Current Ratio, and Debt-Equity Ratio.
Experiment 14: Write a program using Python to perform profit scenario analysis for changes in sales.
Experiment 15: Write a program using Python to compare two investment alternatives using Net Present Value (NPV) and identify the preferable alternative.

TOOLS / SOFTWARE REQUIRED

- Python 3.x
- Jupyter Notebook / JupyterLab
- Google Colab
- NumPy
- Pandas
- Matplotlib
- Seaborn
- OpenPyXL
- SciPy

BOOKS FOR REFERENCE

1. Hilpisch, Y. (2020). Python for Finance: Mastering Data-Driven Finance. 2nd ed. O'Reilly Media.
2. Lewinson, E. (2020). Python for Finance Cookbook. Packt Publishing.
3. McKinney, W. (2022). Python for Data Analysis. 3rd ed. O'Reilly Media.
4. Cielen, D., Meysman, A., & Ali, M. (2016). Introducing Data Science: Big Data, Machine Learning, and More Using Python Tools. Manning Publications.
5. Downey, A. B. (2021). Think Python: How to Think Like a Computer Scientist. O'Reilly Media.

Practical Examination

The practical examination shall assess the student's ability to independently apply Python to a financial analytics problem.
The student may be provided with a **structured financial dataset and a practical problem** based on any of the 15 prescribed experiments.

Examination Pattern	
Component	**Marks**
Program Execution	50
Interpretation of Results	20
Practical Total	**70**
Viva Voce	**30**
Total	**100**

M.Com (Fintech)

Name of the Course : Blockchain Technology and Digital Currency		
Course Code : 2.3	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60Hrs.

Course Description

This course introduces students to blockchain technology and its applications in financial services. It examines the fundamentals of blockchain, distributed ledger technology, cryptocurrencies, digital currencies, smart contracts, decentralized finance, and block chain-based financial applications. The course also focuses on the economic, business, regulatory, accounting, security, and ethical implications of digital currencies and blockchain-enabled financial systems.

Course Objectives

1. To understand the fundamental concepts and principles of blockchain and distributed ledger technology.
2. To examine the role of blockchain and digital currencies in financial services and business.
3. To analyse cryptocurrencies, stablecoins, central bank digital currencies, and other forms of digital assets.
4. To evaluate blockchain-based financial applications including smart contracts and decentralized finance.
5. To assess the regulatory, accounting, security, ethical, and economic implications of block chain and digital currencies.

Course Outcomes

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

CO1: Explain the fundamental concepts, architecture, and functioning of blockchain and distributed ledger technology.

CO2: Analyse the characteristics, applications, and economic significance of cryptocurrencies and digital currencies.

CO3: Evaluate blockchain applications in banking, payments, capital markets, and financial services.

CO4: Examine smart contracts, decentralized finance, and emerging blockchain-based financial applications.

CO5: Assess regulatory, accounting, security, ethical, and business implications of blockchain and digital currencies.

MODULE 1	**Foundations of Blockchain and Distributed Ledger Technology**	**14 Hours**

Introduction to Blockchain Technology; Evolution of Blockchain; Distributed Ledger Technology (DLT); Centralized, Decentralized and Distributed Systems; Characteristics and Features of Blockchain; Blocks, Transactions and Distributed Ledgers; Cryptographic Hashing and its Role in Blockchain; Public and Private Keys; Digital Signatures; Consensus Mechanisms and their Economic Significance; Proof of Work and Proof of Stake; Permissioned and Permissionless Blockchains; Public, Private and Consortium Blockchains; Basic Blockchain Architecture; Advantages and Limitations of Blockchain Technology; Applications of Blockchain in Business and Financial Services.

MODULE 2	**Cryptocurrencies and Digital Assets**	**12 Hours**

Introduction to Cryptocurrencies; Evolution and Characteristics of Digital Currencies; Bitcoin and its Working; Cryptocurrency Transactions and Digital Wallets; Cryptocurrency Exchanges; Major Categories of Crypto Assets; Altcoins and Tokens; Utility Tokens and Security Tokens; Stablecoins and their Applications; **Cryptocurrency, Stablecoins and CBDC – Conceptual Distinction**; Tokenization of Assets; Initial Coin Offerings (ICOs) and Security Token Offerings (STOs); Cryptocurrency Valuation and Market Behaviour; Benefits, Risks and Challenges of Digital Assets; Adoption of Digital Assets in Financial Services.

MODULE 3	Blockchain Applications in Financial Services	12 Hours

Blockchain in Banking and Financial Services; Blockchain-Based Payment Systems; Cross-Border Payments and Remittances; Blockchain in Trade Finance and Supply Chain Finance; Blockchain in Clearing and Settlement; Blockchain Applications in Securities and Capital Markets; Tokenization of Securities and Real-World Assets; Blockchain Applications in Insurance; Blockchain-Based KYC and Customer Verification; Digital Identity Management; Fraud Prevention and Transaction Transparency; Blockchain in Accounting and Auditing; Blockchain Applications in Lending and Credit; Blockchain-Enabled Financial Business Models.

MODULE 4	Smart Contracts and Decentralized Finance	12 Hours

Introduction to Smart Contracts; Characteristics and Working of Smart Contracts; Blockchain Platforms and Smart Contract Ecosystems; Applications of Smart Contracts in Financial Services; Decentralized Finance (DeFi): Concept and Evolution; Decentralized Exchanges; Decentralized Lending and Borrowing; Liquidity Provision and Staking; Automated Market Makers; Stablecoins in DeFi; Traditional Finance versus Decentralized Finance; Benefits, Risks and Limitations of DeFi; Decentralized Autonomous Organizations (DAOs); Emerging Applications of Smart Contracts and DeFi.

MODULE 5	Digital Currency, Regulation and Emerging Issues in FinTech	10 Hours

Central Bank Digital Currency (CBDC): Concept and Characteristics; Retail and Wholesale CBDC; CBDC Models and Design Considerations; CBDC and the Future of Banking and Payments; Digital Currency and Monetary Policy; Cryptocurrency and Digital Asset Regulation; Regulatory Approaches to Digital Assets; Anti-Money Laundering (AML) and Know Your Customer (KYC) Requirements; Taxation and Accounting Treatment of Digital Assets; Cybersecurity and Privacy Issues; Consumer Protection; Ethical and Social Issues; Environmental Concerns of Blockchain; Blockchain Governance; Future of Blockchain and Digital Currency in Financial Services.

SKILL DEVELOPMENT ACTIVITIES

- Analyse the application of blockchain technology in a selected banking, payment, insurance, or capital-market service.
- Compare cryptocurrency, stablecoins, and Central Bank Digital Currency (CBDC) on selected economic, technological, and financial dimensions.
- Identify a financial process suitable for blockchain implementation and evaluate its potential benefits and limitations.
- Examine a practical application of smart contracts in financial services and evaluate its business implications.
- Review the regulatory and taxation framework applicable to cryptocurrencies and digital assets in India and compare it with selected international approaches.

BOOKS FOR REFERENCE

1. Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. Princeton University Press.
2. Antonopoulos, A. M. Mastering Bitcoin: Programming the Open Blockchain. O'Reilly Media.
3. Antonopoulos, A. M., & Wood, G. Mastering Ethereum: Building Smart Contracts and DApps. O'Reilly Media.
4. Mougayar, W. The Business Blockchain: Promise, Practice, and Application of the Next Internet Technology. Wiley.
5. Tapscott, D., & Tapscott, A. Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World. Portfolio.
6. Chuen, D. L. K. Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data. Academic Press.

E - Resources

1. RBI – Central Bank Digital Currency (CBDC)
   https://www.rbi.org.in/
2. RBI – Financial Stability Reports and Publications
   https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx
3. BIS – Innovation and Digital Finance
   https://www.bis.org/topic/fintech.htm
4. BIS – Central Bank Digital Currencies
   https://www.bis.org/topic/cbdc.htm
5. IMF – FinTech and Digital Money
   https://www.imf.org/en/Topics/fintech
6. World Bank – Blockchain and Distributed Ledger Technology
   https://www.worldbank.org/
7. Ethereum Documentation
   https://ethereum.org/en/developers/docs/

Name of the Course : Quantitative Techniques for Finance			
Course Code : 2.4		**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30	**SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60Hrs.

Course Description

This course develops quantitative skills for financial analysis and decision-making. It covers statistical measures, probability, correlation and regression, hypothesis testing, financial forecasting, and quantitative decision models. The course emphasizes numerical applications using business and financial data.

Course Objectives

1. To understand statistical and quantitative techniques used in financial analysis.
2. To apply probability concepts and probability distributions to financial problems.
3. To apply correlation, regression, and statistical inference to financial data.
4. To use time-series and forecasting techniques for financial decision-making.
5. To apply quantitative decision and optimization techniques to financial and business problems.

Course Outcomes

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

CO1: Calculate and interpret descriptive statistical measures using financial data.
CO2: Apply probability concepts and probability distributions to financial problems.
CO3: Apply correlation, regression, and hypothesis testing to analyse relationships in financial data.
CO4: Apply time-series and forecasting techniques to financial and business data.
CO5: Apply quantitative decision and optimization techniques to financial and managerial problems.

MODULE 1	**Descriptive Statistics for Finance**	**10 Hours**

Introduction to Quantitative Techniques in Finance; Role of Quantitative Techniques in Financial Decision-Making; Types of Data; Measures of Central Tendency—Arithmetic Mean, Weighted Mean, Median and Mode; Measures of Dispersion—Range, Variance, Standard Deviation and Coefficient of Variation; Skewness and Kurtosis; Covariance; Applications of Descriptive Statistics in Return, Risk and Financial Performance Analysis.

MODULE 2	**Probability and Probability Distributions**	**12 Hours**

Concept of Probability; Addition and Multiplication Rules of Probability; Conditional Probability; Independent Events; Bayes' Theorem; Random Variables; Expected Value and Variance; Discrete and Continuous Probability Distributions; Binomial Distribution; Poisson Distribution; Normal Distribution; Standard Normal Distribution; Z-Scores; Applications of Probability Distributions in Financial Risk and Decision-Making.

MODULE 3	**Correlation, Regression and Hypothesis Testing**	**14 Hours**

Concept and Types of Correlation; Pearson's Correlation Coefficient; Spearman's Rank Correlation; Interpretation of Correlation; Simple Linear Regression; Regression Equation; Regression Coefficients; Coefficient of Determination (R^2); Applications of Correlation and Regression in Finance; Concept of Statistical Inference; Null and Alternative Hypotheses; Level of Significance; Type I and Type II Errors; One-Tailed and Two-Tailed Tests; Z-Test; t-Test; Chi-Square Test; F-Test; Interpretation of Test Results.

MODULE 4	**Time Series Analysis and Financial Forecasting**	**12 Hours**

Concept and Components of Time Series; Trend, Seasonal, Cyclical and Irregular Variations; Measurement of Trend; Moving Average Method; Least Squares Method; Measurement of Seasonal Variations; Introduction to Stationarity; Autocorrelation—Concept and Interpretation; Moving Average Forecasting; Exponential Smoothing; Forecasting of Financial and Business Variables; Forecast Accuracy; Mean Absolute Error (MAE); Mean Squared Error (MSE); Mean Absolute

Percentage Error (MAPE)		
MODULE 5	**Quantitative Decision Models and Optimization**	**12 Hours**
Quantitative Decision-Making; Decision-Making under Certainty, Risk and Uncertainty; Payoff Matrix; Maximax Criterion; Maximin Criterion; Minimax Regret Criterion; Expected Monetary Value (EMV); Expected Opportunity Loss (EOL); Decision Trees; Introduction to Linear Programming; Formulation of Linear Programming Problems; Objective Function and Constraints; Graphical Solution of Linear Programming Problems; Applications of Linear Programming in Resource Allocation and Financial Decision-Making; Sensitivity Analysis—Concept and Interpretation.		

SKILL DEVELOPMENT ACTIVITIES

- Calculate and interpret descriptive statistical measures using stock return or other financial data.
- Apply probability distributions to analyse financial risk and expected outcomes.
- Analyse relationships between financial variables using correlation and regression.
- Forecast a financial or business variable using time-series techniques and evaluate forecast accuracy.
- Apply decision models or linear programming to a financial or business decision problem.

BOOKS FOR REFERENCE

1. Swift, L., & Piff, S. Quantitative Methods for Business, Management and Finance. Palgrave Macmillan.
2. Oakshott, L. Essential Quantitative Methods for Business, Management and Finance. Palgrave Macmillan.
3. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. Quantitative Methods for Business. Cengage Learning.
4. Levin, R. I., & Rubin, D. S. Statistics for Management. Pearson.
5. Tulsian, P. C., & Jhunjhunwala, B. Business Statistics: A Self-Study Textbook. S. Chand.
6. Indian Institute of Banking & Finance. Quantitative Methods. Macmillan Education.

E-Resources

1. SWAYAM – Online Courses
   https://swayam.gov.in/
2. NPTEL – Management and Quantitative Methods Courses
   https://onlinecourses.nptel.ac.in/
3. OpenStax – Introductory Business Statistics
   https://openstax.org/details/books/introductory-business-statistics-2e
4. Khan Academy – Statistics and Probability
   https://www.khanacademy.org/math/statistics-probability

Name of the Course : GST and Customs Duty		
Course Code : 2.5	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course aims to develop a systematic understanding of the conceptual, legal, and procedural aspects of Goods and Services Tax (GST) and Customs Duty in India. It examines the structure of GST, including levy, supply, valuation, input tax credit, and statutory compliance. The course also analyses customs law with respect to classification, valuation, and assessment of import and export duties. Emphasis is placed on interpreting tax provisions and applying them to practical business situations. On completion, students will be able to comply with indirect tax regulations and support decision-making in taxation and trade practices

Course Objectives:

1. To understand the basic concepts of indirect taxation and provide comprehensive knowledge of Goods and Services Tax (GST) and Customs Duty Laws in India.
2. To understand the legal and procedural aspects of GST and Customs laws.
3. To analyze the practical aspects of GST compliance and Customs procedures.
4. To equip students with the skills to interpret and apply GST and Customs legislation for business decision-making.

Course Outcomes:

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

CO1: Understand the constitutional and legal framework of GST.
CO2: Analyze GST procedures relating to registration, levy, and supply.
CO3: Compute GST liability and input tax credit.
CO4: Prepare GST returns and understand assessment procedures.
CO5: Examine GST implications in special transactions and international trade

MODULE 1	**Introduction and Constitutional Framework of GST**	**10 Hours**

Introduction to Indirect Taxes - Meaning and features of indirect taxes, Direct tax vs indirect tax, Evolution of indirect taxation in India, Shortcomings of the pre-GST tax regime, Concept and objectives of GST, Advantages and challenges of GST.
Constitutional Amendment for GST- Features of the Constitution (101st Amendment) Act, GST Council – constitution, powers, and functions, Important definitions under GST Act.
Structure of GST - Dual GST model, CGST, SGST/UTGST, IGST, Destination-based tax system, Taxes subsumed under GST, GST rates and slabs, GSTN (Goods and Services Tax Network).
Levy and Collection of GST - Taxable event under GST, Levy and collection provisions.

MODULE 2	**Registration and Supply under GST**	**14 Hours**

Registration - Persons liable for registration, Threshold limits, Compulsory registration, Voluntary registration, Procedure for registration, Amendment and cancellation of registration, Composition scheme.
Concept of supply – Meaning, scope and essentials of supply, Supply of goods vs supply of services, Schedule I, II, and III of CGST Act, Time of supply of goods and services, Place of supply provisions. Types of Supply - Composite Supply and Mixed supply.
Value of supply - Transaction value, Inclusions and exclusions, Valuation rules, Discounts and subsidies, Related party transactions.
Documentation - Tax invoice, Bill of supply, Debit note and credit note, E-way bill system, Maintenance of accounts and records

MODULE 3	**Input Tax Credit and GST Computation**	**14 Hours**

Input Tax Credit (ITC) - Meaning and objectives of ITC, Eligibility and conditions for claiming ITC, Blocked credits, Apportionment of ITC, Reversal and recovery of ITC.

Utilization of ITC - Order of utilization of ITC, Cross-utilization rules, Electronic credit ledger, electronic cash ledger.
Computation of GST Liability - Computation of taxable turnover, GST computation for intra-state and inter-state supplies, Computation under composition scheme, Practical problems on GST computation
Payment of GST - Modes of payment, Interest, penalty, and late fees, electronic payment systems.

MODULE 4	GST Returns, Assessment and Audit	12 Hours

GST Returns - Types of GST returns, GSTR-1, GSTR-3B, GSTR-9, Filing -procedures, Due dates and late filing consequences, Matching, reconciliation, and rectification.
Assessment under GST - Types of assessment, Self-assessment, Provisional assessment, Best judgment assessment, Scrutiny assessment.
Audit and Inspection - Audit under GST, Departmental audit, Special audit, Inspection, search, seizure, and arrest, Offences and penalties.
Appeals and Advance Ruling - Appellate authorities, Goods and Services Tax Appellate Tribunal (GSTAT), Appeal procedures, Advance ruling mechanism, Anti-profiteering provisions.

MODULE 5	Customs Duty	10 Hours

Concept of Customs Duty and its Constitutional Authority; Types of Customs Duty; Valuation of Goods under Customs; Import - Export Documentation & Procedure; Warehousing under Customs; Duty Drawback Scheme and Export Promotion Schemes.

SKILL DEVELOPMENT ACTIVITIES

- GST Registration and Compliance Exercise
- GST Return Filing Simulation
- Analyze recent GST or Customs case laws decided by the GST Appellate Authority, High Courts, or the Supreme Court.
- Prepare a comprehensive GST compliance report for a hypothetical business

BOOKS FOR REFERENCE

1. Datey, V. S. (2026). GST & indirect taxes*: Law and practice*. Taxmann Publications.
2. Jain, R. K. (2026). GST law manual (26th ed., 2 vols.). Centax Publications.
3. Taxmann Editorial Board. (2026). *GST manual with GST law guide & digest of landmark rulings* (27th ed., 2 vols.). Taxmann Publications.
4. Datey, V. S. (2026). GST ready reckoner. Taxmann Publications.
5. Bangar, V., & Bangar, Y. (2026). GST law and practice. Aadhya Prakashan.
6. Jain, R. K. (2026). Customs law, practice and procedure. Centax Publications.
7. Institute of Cost Accountants of India. (2026). Study material on goods and services tax. The Institute of Cost Accountants of India.
8. Central Board of Indirect Taxes and Customs. (2026). GST Acts, rules, notifications and circulars. Government of India.

E-Resources

1. SWAYAM – UGC (CEC), Indirect Tax Law, Dr. Shankar S. Sodha
2. SWAYAM – UGC, GST – The Basics of Goods and Services Tax, Dr. Alice Mani
3. SWAYAM – IGNOU, Introduction to GST, Prof. Anirban Ghosh
4. SWAYAM – UGC (CEC), Indirect Taxes and Customs Duty, Prof. Subrata Kumar Dey
5. SWAYAM – IGNOU, GST and Customs Procedures

Name of the Course : Digital Marketing			
Course Code : 2.6		**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30	**SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60Hrs.

Course Description:

This course provides a comprehensive understanding of digital marketing concepts and tools relevant to contemporary business environments. It covers key areas such as search engine optimization, social media marketing, content marketing, and online advertising. The course emphasizes data-driven decision-making through web analytics and performance measurement. Students gain practical exposure to digital platforms and digital consumer behaviour. On completion, learners will be able to design, implement, and evaluate digital marketing strategies for business organizations.

Course Objectives:

1. To provide conceptual knowledge of digital marketing principles and the digital business environment.
2. To familiarize students with major digital marketing tools such as SEO, SEM, social media, and content marketing.
3. To develop the ability to analyse digital consumer behaviour and online market trends.
4. To enable students to use web analytics and performance metrics for evaluating digital marketing campaigns.
5. To equip students with practical skills to design and implement effective digital marketing strategies for business organizations.

Course Outcomes:

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

CO1: Explain core concepts and frameworks of digital marketing and their role in modern business.

CO2: Apply digital marketing tools such as SEO, social media, email, and online advertising in business contexts.

CO3: Analyse digital consumer behaviour and online market data to support marketing decisions.

CO4: Evaluate digital marketing campaign performance using web analytics and key performance indicators.

CO5: Design and present an integrated digital marketing strategy for a business or brand.

MODULE 1	**Introduction to Digital Marketing**	**12 Hours**

Introduction, Meaning & Definition, History, Objectives, Features, Scope, Benefits and Problems, Techniques, Digital Marketing v/s Real Marketing. Landscape – Past – Today – Future; Internet Infrastructure Stack Business Models & Strategies: Strategic Planning – Strategy to Electronic Planning – Strategic Drivers of the Internet Economy – Business Models to Digital Business Models – E-Business Models– Performance Metrics – The Balanced Scorecard.

MODULE 2	**Digital Marketing Environment**	**14 Hours**

Product – Products on Internet – Creating Customer Value Online – Product Benefits – E-Marketing Enhanced Product Development – Price – Change in Pricing Strategies – Buyer and Seller Perspectives – Payment Options – Pricing Strategies – Distribution– Online Channel Intermediaries – Distribution Channel Length and Functions – Channel Management and Power – Distribution Channel Metrics – Promotion – Integrated Marketing Communication (IMC) – Internet Advertising – Marketing Public Relations – Sales Promotion Offers – Direct Marketing – Personal Selling – IMC Metrics. Search Engine Optimization (SEO) – Contents, Tools & Optimization. Content Management – SWOC.

MODULE 3	**Research & Environment**	**12 Hours**

Data Drive Strategy – Marketing Knowledge Management – Monitoring Social Media – Technology-Enabled Approaches – Real-Space Approaches – Marketing Databases and Data Warehouses – Data

Analysis and Distribution – Knowledge Management Metrics - Consumer Behaviour Online – Segmentation – Targeting – Differentiation – Positioning Strategies, Online Marketing Research Tools, Affiliated Marketing – Concept. Overview of Global E-Marketing Issues – Country and Market Opportunity Analysis – Technological Readiness Influences Marketing – Wireless Internet.

MODULE 4	Customer Acquisition and Retention	10 Hours

Profile of Consumers – Browsing Behaviour Model – Elements of Social Media – Social Media Strategies – Social Media Performance Metrics – Building Customer Relationships – Relationship Marketing – Stakeholders – Three Pillars of Relationship Marketing – Customer Relationship Management (CRM) – CRM Building Blocks – Ten rules for CRM Success – CRM Platforms, Strategies & Models. E-CRM System: Why & Uses, Website Solution Method, Web Analytics & Use of Google Analytics – Reports.

MODULE 5	Emerging Issues	12 Hours

Online Governance and ICANN – Jurisdiction – Fraud – Consumer Loyalty of Website-Services – The Quadratic Effect of Flow – Role of Technology Readiness in Developing Trust and Loyalty for E-Services in Developing. Access – The Digital Divide Ethical and Legal Issues – Privacy – Digital Property – Online Expression – Cyber Security –Cyber Crime. Email, Facebook, Instagram, LinkedIn and other Social Applications Marketing - Concept

Skill Development Activities

- Digital Marketing Strategy Design Exercise
- Case Study Discussion on Digital Campaigns
- Influencer Marketing Role Play

Suggested Books for Reference

1. Chaffey, D., & Ellis-Chadwick, F. Digital Marketing: Strategy, Implementation and Practice. Pearson.
2. Kingsnorth, S. Digital Marketing Strategy: An Integrated Approach to Online Marketing. Kogan Page.
3. Ryan, D. Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation. Kogan Page.
4. Kannan, P. K., & Li, H. Digital Marketing: Strategy and Tactics. SAGE Publications.
5. Dodson, I. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns. Wiley.
6. Puneet Singh Bhatia. Fundamentals of Digital Marketing. Pearson India.
7. Seema Gupta. Digital Marketing. McGraw Hill Education India.
8. Kaushik, A. Web Analytics 2.0: The Art of Online Accountability and Science of Customer Centricity. Wiley

E-Resources

1. SWAYAM – UGC (CEC), Digital Marketing, Dr. Tejinderpal Singh
2. SWAYAM – UGC (CEC), Introduction to Digital Marketing, Dr. S. Sangeetha
3. SWAYAM – IGNOU, Digital Marketing and Social Media Marketing
4. SWAYAM – IGNOU, Entrepreneurship Skills and Digital Marketing Strategies, Dr. Gagan Singh & Dr. Gopal Datt
5. SWAYAM – UGC, AI in Digital and Social Media Marketing, Dr. Mahalakshmi S

Name of the Course : Business Models for Startups		
Course Code : 2.7	**Course Credits:** 2	**No. of Hours per week:** 3 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 45 Hrs.

Course Description:

This course introduces students to the concept and design of business models in startup ventures. It examines various business model frameworks, revenue models, and value creation mechanisms. The course emphasizes opportunity identification, customer discovery, and validation of business ideas. Students learn to analyze scalability, sustainability, and risk in start-up business models. On completion, learners will be able to design and evaluate viable business models for start-up enterprises.

Course Objectives:

1. To develop an understanding of the concept and significance of business models in startup ventures.
2. To familiarize students with various business model frameworks, revenue models, and value propositions.
3. To enable students to identify and evaluate startup opportunities using customer and market insights.
4. To analyse the scalability, sustainability, and risk factors associated with startup business models.
5. To equip students with the ability to design, test, and present viable business models for startup enterprises.

Course Outcomes:

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

CO1: Explain the concepts, components, and types of business models relevant to startup ventures.
CO2: Apply business model frameworks such as the Business Model Canvas to startup ideas.
CO3: Analyze customer needs, value propositions, and revenue models for startup feasibility.
CO4: Evaluate the scalability, sustainability, and risk associated with different startup business models.
CO5: Design and present a viable and innovative business model for a startup enterprise.

MODULE 1	Introduction to Startup	12 Hours

Introduction, Meaning & Definition, Characteristics, Types, Objectives, Scope of Start ups, Functions, Eligibility Criteria for Start-ups, List of recent successful Start-ups in India and their stories. Pradhan Mantri MUDRA Yojana, Venture Capital Scheme, Support for International Patent Protection in Electronics & Information Technology (SIP-EIT), Stand up India, Single Point Registration Scheme (SPRS), Extra Mural Research Funding, High Risk – High Reward Research and other schemes.

MODULE 2	Startup India	08 Hours

Introduction**,** Overview of Indian Startup Ecosystem, Government Initiatives – Handholding, Funding / Incentives, Incubation centres, Credit Guarantee Scheme for Startups, Tax Exemptions & Legal support by government, Benefits to Start-ups by Indian Government, Other State Initiatives to support Start-ups, Challenges for Start-ups in India.

MODULE 3	Business Plan	08 Hours

Business Plan, Importance of BP, Preparation of BP, Typical BP format – Financial aspects of the BP – Marketing aspects of the BP – Human Resource aspects of the BP – Technical aspects of the BP – Social aspects of the BP – Preparation of BP – Common pitfalls to be avoided in preparation of a BP.

MODULE 4	Business Models	10 Hours

Introduction to Business Models, Meaning & Definition, change in business models, impact of technology on business models, Case Studies: Swiggy Business Model, Paytm Business Model, Ola

Business Model, Oyo Rooms Business Model, Byju's Business Model, Flipkart Business Model, iD Fresh Food Business Model and other International Business Models. Successful Business Models in India and abroad.

MODULE 5	Risks in Business Models	07 Hours

What is Risk, Types of Risks in Business Models, Risk Mitigation Strategies. Introduction to Risk Management, Meaning & Definition, Steps, Risk management practices adopted by promoters of business, Recent trends in business models.

SKILL DEVELOPMENT ACTIVITIES

- Preparation of a Business Model Canvas for a startup idea through group activity.
- Customer problem–solution mapping exercise using real or hypothetical startup cases.
- Revenue model design activity comparing different monetization strategies for startups.
- Pitching and peer evaluation of startup business models in the classroom.
- Case analysis of successful and failed startup business models to identify key learning points.

BOOKS FOR REFERENCE

1. Adam J. Bock, Gerard George, "The Business Model Book", Pearson Education Limited, 2017.
2. Alexander Chernev, "The Business Model: How to Develop New Products, Create Market Value and Make the Competition Irrelevant", Cerebellum Press, 2017
3. P. Kanagasabapathi, "Indian Models of Economy, Business & Management", PHI Learning, 2013.
4. https://timesnext.com/business-models-of-most-successful-startups-in-india/
5. https://www.startupindia.gov.in/content/sih/en/government-schemes.html
6. https://www.marketingmind.in/10-biggest-challenges-faced-by-startups-in-india/
7. Respective Business Models by Companies.
8. https://www.cloudways.com/blog/best-startup-books-for-new-entrepreneurs/

E-Resources

1. SWAYAM – NPTEL, Entrepreneurship, Prof. Sunil Mishra
2. SWAYAM – NPTEL, Developing Soft Skills and Personality (Entrepreneurial Perspective), Prof. T. Ravichandran
3. SWAYAM – UGC (CEC), Innovation, Business Models and Entrepreneurship, Prof. Neharika Vohra
4. SWAYAM – IGNOU, Entrepreneurship Development
5. SWAYAM – UGC, Business Model and Funding, Dr. P. S. Aithal

Name of the Course : Data Visualization for Business and Finance		
Course Code : 3.1	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course introduces the principles and techniques of data visualization for business and financial decision-making. It focuses on selecting appropriate visualizations, designing effective charts, presenting business and financial information, developing dashboards, and communicating data-driven insights using contemporary visualization tools.

Course Objectives:

1. To understand the principles and role of data visualization in business and finance.
2. To select appropriate visualization techniques for different types of data.
3. To apply visualization techniques to business and financial information.
4. To understand the design and use of dashboards for performance analysis.
5. To Interpret and communicate business and financial insights through effective visualizations.

Course Outcomes:

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

CO1: Explain the principles, purposes, and techniques of data visualization.
CO2: Select appropriate charts and visual representations for different business and financial datasets.
CO3: Apply visualization techniques to analyse business and financial performance.
CO4: Design effective dashboards for monitoring financial and business indicators.
CO5: Interpret and communicate data-driven insights through visual reports and dashboards.

MODULE 1	**Foundations of Data Visualization**	**12 Hours**

Meaning and Importance of Data Visualization; Role of Visualization in Business and Finance; Data Visualization Process; Types of Data—Categorical, Numerical, Temporal and Geographical; Dimensions and Measures; Principles of Effective Visualization; Visual Encoding—Position, Length, Size, Shape and Colour; Data-Ink Ratio; Chart Selection; Accuracy and Clarity in Visualization; Common Visualization Errors; Misleading Visualizations; Ethical Presentation of Data; Data Storytelling and Visual Communication.

MODULE 2	**Charts and Visualization Techniques**	**12 Hours**

Tables and Highlight Tables; Bar and Column Charts; Stacked and Grouped Charts; Line and Area Charts; Pie and Donut Charts; Histogram; Box Plot; Scatter Plot; Bubble Chart; Heat Map; Tree Map; Waterfall Chart; Funnel Chart; Combination Charts; Sparklines; Choosing Appropriate Charts for Comparison, Composition, Distribution, Relationship and Trend Analysis; Chart Formatting; Labels, Legends, Axes and Annotations.

MODULE 3	**Financial Data Visualization**	**12 Hours**

Nature and Characteristics of Financial Data; Time-Series Financial Data; Visualization of Revenue, Cost and Profit; Financial Statement Visualization; Ratio Visualization; Budget versus Actual Visualization; Variance Visualization; Cash Flow Visualization; Stock Price and Return Visualization; Risk and Volatility Visualization; Portfolio Performance Visualization; Benchmark Comparison; Banking and Credit Data Visualization; Visualization of Financial KPIs; Interpretation of Financial Visualizations.

MODULE 4	**Business Data Visualization and Dashboards**	**12 Hours**

Business Performance Visualization; Sales and Revenue Visualization; Cost and Profitability Visualization; Customer and Product Performance Visualization; Segment and Regional Performance

Visualization; Key Performance Indicators (KPIs); Concept and Purpose of Dashboards; Types of Dashboards—Strategic, Analytical and Operational; Dashboard Components; KPI Cards; **Filters and Interactive Controls; Drill-Down Analysis; Interactive Visualizations; Interactive Dashboards**; Dashboard Layout and Visual Hierarchy; Principles of Effective Dashboard Design

MODULE 5	Visual Analytics and Data Storytelling	12 Hours

Concept of Visual Analytics; Exploratory and Explanatory Visualization; Comparative Analysis; Trend and Pattern Identification; Identification of Outliers and Exceptions; Relationships and Correlations through Visualization; Data Storytelling; Story Structure in Business Communication; Combining Charts, Text and Annotations; Executive Visual Reports; Management Reporting; Financial Performance Reporting; Presentation of Analytical Findings; Audience-Oriented Visualization; Ethical and Responsible Visual Communication; Emerging Trends in Business and Financial Visualization.

SKILL DEVELOPMENT ACTIVITIES

- Identify appropriate chart types for different business and financial datasets and justify the selection.
- Analyse examples of misleading business or financial visualizations and suggest suitable corrections.
- Prepare visual representations of revenue, cost, profit, and financial ratios of a selected company.
- Examine a business or financial dashboard and evaluate its KPIs, layout, and visual effectiveness.
- Prepare a visual story using business or financial data and communicate the major analytical findings.

BOOKS FOR REFERENCE

1. Knaflic, C. N. (2015). Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.
2. Few, S. (2013). Information Dashboard Design: Displaying Data for At-a-Glance Monitoring (2nd ed.). Analytics Press.
3. Cairo, A. (2016). The Truthful Art: Data, Charts, and Maps for Communication. New Riders.
4. Nussbaumer Knaflic, C. (2022). Storytelling with You: Plan, Create, and Deliver a Stellar Presentation. Wiley.
5. Wilke, C. O. (2019). Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures. O'Reilly Media.
6. Wexler, S., Shaffer, J., & Cotgreave, A. (2017). The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios. Wiley.

E-Resources

1. Microsoft Learn – Power BI
   https://learn.microsoft.com/en-us/power-bi/
2. Tableau Learning Resources
   https://www.tableau.com/learn
3. Microsoft Learn – Data Visualization
   https://learn.microsoft.com/
4. Storytelling with Data
   https://www.storytellingwithdata.com/
5. SWAYAM
   https://swayam.gov.in/

Name of the Course : Data Visualization for Business and Finance-LAB		
Course Code : 3.2	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
Viva : 30 **Practical exam:** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This laboratory course develops practical skills in visualizing business and financial data using Python. Students create charts, financial visualizations, interactive dashboards, and visual reports to identify patterns, interpret performance, and communicate data-driven insights.

Course Objectives:

1. To apply Python-based tools to create appropriate business and financial visualizations.
2. To develop visualizations for comparison, composition, distribution, relationship, and trend analysis.
3. To create and interpret visual representations of financial and business performance.
4. To develop interactive dashboards for monitoring business and financial indicators.
5. To communicate analytical findings through visual reports and data storytelling.

Course Outcomes:

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

CO1: Create appropriate visualizations for different types of business and financial data using Python.

CO2: Develop and interpret charts for comparison, composition, distribution, relationship, and trend analysis.

CO3: Visualize financial and business performance using appropriate graphical techniques.

CO4: Develop interactive dashboards for business and financial analysis.

CO5: Communicate analytical findings through visual reports and data stories.

MODULE 1	**Foundations of Data Visualization Laboratory**	**10 Hours**

Experiment 1: Write a program using Python to create bar, column, line, and pie charts for sales data.

Experiment 2: Write a program using Python to create histogram, box plot, and scatter plot for sales and profit data.

Experiment 3: Write a program using Python to visualize product-wise sales, market share, sales distribution, and monthly sales trend.

MODULE 2	**Business Visualization Techniques Laboratory**	**14 Hours**

Experiment 4: Write a program using Python to create grouped, stacked, and combination charts for product-wise sales and profit data.

Experiment 5: Write a program using Python to create heat map and tree map for product-wise and region-wise sales data.

Experiment 6: Write a program using Python to create waterfall and funnel charts for sales performance data

MODULE 3	**Financial Data Visualization Laboratory**	**12 Hours**

Experiment 7: Write a program using Python to visualize Revenue, Cost, Profit, and Profit Margin.

Experiment 8: Write a program using Python to visualize Current Ratio, Debt-Equity Ratio, Net Profit Margin, and budget-versus-actual performance.

Experiment 9: Write a program using Python to visualize stock prices and returns of selected securities

MODULE 4	Business and Financial Visual Reporting Laboratory	14 Hours

Experiment 10: Write a program using Python to create a visual report showing **monthly Sales, Cost, Profit, and Profit Margin**.
Experiment 11: Write a program using Python to create a visual report showing **Revenue, Net Profit, Current Ratio, and Debt-Equity Ratio**.
Experiment 12: Write a program using Python to create **interactive sales visualizations with product and region filters**

MODULE 5	Visual Analytics and Data Storytelling Laboratory	10 Hours

Experiment 13: Write a program using Python to identify and visualize **sales trends and outliers in monthly sales data**.
Experiment 14: Write a program using Python to create a visual data story comparing **Revenue, Cost, and Profit across different periods**.
Experiment 15: Write a program using Python to create an executive visual summary of **Revenue, Profit, Profit Margin, and Sales Growth**.

BOOKS FOR REFERENCE

1. Knaflic, C. N. Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.
2. Wilke, C. O. Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures. O'Reilly Media.
3. VanderPlas, J. Python Data Science Handbook. O'Reilly Media.
4. McKinney, W. Python for Data Analysis. O'Reilly Media.
5. Wexler, S., Shaffer, J., & Cotgreave, A. The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios. Wiley.

Practical Examination

The practical examination shall assess the student's ability to independently apply Python to a Data visualization.
The student may be provided with a **structured financial dataset and a practical problem** based on any of the 15 prescribed experiments.

Examination Pattern	
Component	**Marks**
Program Execution	50
Interpretation of Results	20
Practical Total	**70**
Viva Voce	**30**
Total	**100**

Name of the Course : Artificial Intelligence and Machine Learning for Finance		
Course Code : 3.3	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course introduces the concepts and applications of Artificial Intelligence and Machine Learning in finance. It focuses on AI and ML techniques used in banking, credit, investment, risk management, fraud detection, and financial decision-making, with emphasis on conceptual understanding, model interpretation, and responsible application.

Course Objectives:

1. To understand the fundamental concepts of Artificial Intelligence and Machine Learning and their relevance to finance.
2. To examine major Machine Learning approaches and their applications to financial problems.
3. To understand the application of AI and ML in banking, credit, investment, risk management, and fraud detection.
4. To interpret and evaluate Machine Learning models and their outcomes from a financial decision-making perspective.
5. To examine ethical, governance, and emerging issues associated with AI and Machine Learning in financial services.

Course Outcomes:

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

CO1: Explain the fundamental concepts and approaches of Artificial Intelligence and Machine Learning.

CO2: Distinguish between major Machine Learning techniques and identify their suitability for financial applications.

CO3: Analyse applications of AI and Machine Learning in banking, credit, investment, risk, and fraud management.

CO4: Interpret and evaluate the performance and outcomes of Machine Learning models used in finance.

CO5: Evaluate ethical, governance, and emerging issues relating to the application of AI and Machine Learning in financial services.

MODULE 1	**Foundations of Artificial Intelligence and Machine Learning**	**10 Hours**

Artificial Intelligence – Meaning, Characteristics and Evolution; Artificial Intelligence, Machine Learning and Deep Learning – Distinction; Role of AI in Financial Services; Machine Learning – Meaning and Process; Data, Features, Target Variables and Models; Training and Testing Data; Supervised Learning; Unsupervised Learning; Reinforcement Learning – Conceptual Overview; Classification and Regression Problems; Machine Learning Workflow; Opportunities and Limitations of AI and ML in Finance.

MODULE 2	**Supervised Machine Learning for Finance**	**14 Hours**

Concept of Supervised Learning; Regression and Classification; Linear Regression; Logistic Regression; Decision Trees; Random Forest; K-Nearest Neighbours; Support Vector Machines – Conceptual Overview; Financial Applications of Regression and Classification; Credit Scoring; Loan Default Prediction; Customer Churn Prediction; Financial Distress Prediction; Model Training and Prediction; Overfitting and Underfitting; Bias–Variance Concept; Selection of Appropriate Supervised Learning Models.

MODULE 3	Unsupervised Learning and Financial Applications	12 Hours

Concept of Unsupervised Learning; Supervised versus Unsupervised Learning; Clustering; K-Means Clustering; Hierarchical Clustering – Conceptual Overview; Customer Segmentation; Investor Profiling; Borrower Segmentation; Pattern Identification in Financial Data; Introduction to Dimensionality Reduction; Principal Component Analysis – Concept and Applications; Anomaly Detection – Concept; Applications of Unsupervised Learning in Banking, Insurance, Investment and Financial Services.

MODULE 4	AI and Machine Learning Applications in Finance	14 Hours

AI and ML in Banking and Financial Services; Credit Risk Assessment; Loan Default Prediction; Fraud Detection; Anti-Money Laundering Applications; Insurance Risk Assessment and Claims Analysis; Investment and Portfolio Applications; Market Sentiment Analysis; Robo-Advisory; Customer Behaviour Analysis; Customer Churn Management; Personalized Financial Services; AI in Financial Forecasting; Natural Language Processing in Finance – Concept and Applications; Chatbots and Virtual Financial Assistants; Generative AI in Financial Services – Concept and Applications.

MODULE 5	Model Evaluation, Explainable AI and Responsible AI	10 Hours

Need for Model Evaluation; Training, Validation and Testing – Conceptual Understanding; Confusion Matrix; Accuracy; Precision; Recall; F1-Score; ROC and AUC – Conceptual Interpretation; Regression Evaluation Measures – MAE, MSE, RMSE and R-Squared; Model Selection and Interpretation; Explainable Artificial Intelligence (XAI); Importance of Explainability in Financial Decisions; Algorithmic Bias and Fairness; Data Privacy; Transparency and Accountability; Model Risk; Human Oversight; Responsible AI; Ethical Use of AI in Finance; Emerging Trends and Challenges in AI-enabled Financial Services.

SKILL DEVELOPMENT ACTIVITIES

- Analyse the application of Artificial Intelligence in a selected banking or financial service.
- Compare supervised and unsupervised Machine Learning techniques with reference to their financial applications.
- Examine a case involving the use of Machine Learning for credit scoring, loan default prediction, or fraud detection.
- Interpret a given confusion matrix and evaluate the performance of a financial classification model.
- Analyse an ethical or bias-related issue arising from the use of Artificial Intelligence in financial decision-making.

BOOKS FOR REFERENCE

1. Géron, A. (2022). Hands-on machine learning with Scikit-Learn, Keras, and TensorFlow (3rd ed.). O'Reilly Media.
2. James, G., Witten, D., Hastie, T., Tibshirani, R., & Taylor, J. (2023). An introduction to statistical learning: With applications in Python. Springer.
3. Hull, J. C. (2021). Machine learning in business: An introduction to the world of data science (3rd ed.). Independently Published.
4. Dixon, M. F., Halperin, I., & Bilokon, P. (2020). Machine learning in finance: From theory to practice. Springer.
5. Hilpisch, Y. (2020). Artificial intelligence in finance: A Python-based guide. O'Reilly Media.
6. Molnar, C. (2025). Interpretable machine learning: A guide for making black box models explainable (3rd ed.). Christoph Molnar.

E-Resources

1. SWAYAM (NPTEL) – Security Analysis and Portfolio Management (IIT Roorkee)
2. Coursera – Investment Management Specialization (University of Geneva)

3. NSE Academy – Technical Analysis Certification
4. BSE Institute Ltd. – Certificate Programme in Algorithmic Trading and Technical Analysis

Name of the Course : Innovation Management		
Course Code : 3.4	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course provides an understanding of innovation and its management in contemporary organizations. It examines innovation processes, sources of innovation, innovation strategy, business models, organizational capabilities, and commercialization of innovation. The course emphasizes managing innovation from idea generation to market implementation.

Course Objectives:

1. To understand the concepts, types, sources, and significance of innovation in organizations.
2. To examine the process of generating, evaluating, selecting, and developing innovative ideas.
3. To analyse strategies and organizational practices for managing innovation.
4. To understand business model innovation and the process of commercializing innovations.
5. To evaluate contemporary approaches, challenges, and practices in managing innovation.

Course Outcomes:

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

CO1: Explain the concepts, types, sources, and processes of innovation.
CO2: Analyse the process of idea generation, evaluation, selection, and development.
CO3: Evaluate innovation strategies and organizational capabilities required for managing innovation.
CO4: Analyse business model innovation and approaches to commercialization.
CO5: Evaluate contemporary innovation practices and challenges faced by organizations.

MODULE 1	**Foundations of Innovation Management**	**10 Hours**

Meaning and Concept of Innovation; Invention versus Innovation; Creativity and Innovation; Importance of Innovation in Business; Evolution of Innovation Management; Types of Innovation – Product, Process, Service, Marketing and Organizational Innovation; Incremental and Radical Innovation; Sustaining and Disruptive Innovation; Closed and Open Innovation; Sources of Innovation; Drivers and Barriers to Innovation; Innovation and Competitive Advantage; Innovation Management in the Digital Economy.

MODULE 2	**Innovation Process and Idea Management**	**12 Hours**

Innovation Process; Stages of Innovation; Opportunity Identification; Sources of Innovative Ideas; Idea Generation; Creativity Techniques; Brainstorming; Design Thinking – Concept and Stages; Idea Screening and Evaluation; Selection of Innovative Ideas; Concept Development; Prototyping – Concept; Testing and Validation; Innovation Funnel; Stage-Gate Process; Managing the Innovation Pipeline; Factors Affecting Innovation Success and Failure.

MODULE 3	**Innovation Strategy and Organizational Management**	**14 Hours**

Innovation Strategy; Alignment of Innovation with Business Strategy; Technology-Push and Market-Pull Innovation; First-Mover and Follower Strategies; Innovation Portfolio; Organizational Structure for Innovation; Innovation Teams; Leadership and Innovation; Organizational Culture for Innovation; Employee Innovation and Intrapreneurship; Knowledge Management and Organizational Learning; Collaboration and Co-Creation; Open Innovation Strategy; Innovation Networks and Strategic Partnerships; Measuring Innovation Performance.

MODULE 4	Business Model Innovation and Commercialization	12 Hours

Concept of Business Model; Components of a Business Model; Business Model Innovation; Value Proposition; Value Creation, Delivery and Capture; Business Model Canvas – Concept and Components; Platform Business Models; Digital Business Models; Innovation Commercialization; Market Assessment; Market Entry for Innovations; Adoption and Diffusion of Innovation; Technology Adoption Life Cycle; Scaling Innovation; Factors Affecting Commercialization; Managing Market and Commercialization Risk.

MODULE 5	Contemporary Innovation Management	12 Hours

Digital Innovation; Technology-Enabled Innovation; Service Innovation; Frugal Innovation; Reverse Innovation; Social Innovation; Sustainable and Green Innovation; Collaborative Innovation; Corporate Innovation Programmes; Innovation Labs; Incubators and Accelerators; Innovation Ecosystems; University–Industry Collaboration; Intellectual Property and Innovation – Conceptual Overview; Responsible Innovation; Ethical Issues in Innovation; Innovation Failure and Learning; Emerging Trends in Innovation Management.

SKILL DEVELOPMENT ACTIVITIES

- Analyse a successful product, process, service, or business model innovation of a selected organization.
- Apply the stages of Design Thinking to identify and propose a solution to a selected business problem.
- Prepare a Business Model Canvas for an innovative product or service.
- Analyse the innovation strategy and innovation practices of a selected organization.
- Examine a failed innovation and identify the major factors responsible for its failure

BOOKS FOR REFERENCE

1. Tidd, J., & Bessant, J. R. (2024). Managing innovation: Integrating technological, market and organizational change (8th ed.). Wiley.
2. Trott, P. (2024). Innovation management and new product development (7th ed.). Pearson.
3. Drucker, P. F. (2006). Innovation and entrepreneurship: Practice and principles. Harper Business.
4. Christensen, C. M. (2024). The innovator's dilemma: When new technologies cause great firms to fail (with a new foreword by M. Benioff). Harvard Business Review Press.
5. Osterwalder, A., & Pigneur, Y. (2010). Business model generation: A handbook for visionaries, game changers, and challengers. Wiley.
6. Govindarajan, V., & Trimble, C. (2012). Reverse innovation: Create far from home, win everywhere. Harvard Business Press.
7. Chesbrough, H. W. (2003). Open innovation: The new imperative for creating and profiting from technology. Harvard Business School Press.

E-Resources

1. NPTEL – Innovation, Entrepreneurship and Management Courses
   https://onlinecourses.nptel.ac.in/
2. SWAYAM – Management and Innovation Courses
   https://swayam.gov.in/
3. Startup India – Innovation and Startup Ecosystem
   https://www.startupindia.gov.in/
4. Atal Innovation Mission – NITI Aayog
   https://aim.gov.in/
5. World Intellectual Property Organization – Innovation
   https://www.wipo.int/

Name of the Course : Corporate Valuation			
Course Code :	3.5	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30	**SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description

This course provides a rigorous framework for valuing firms, business units, and financial assets. It examines fundamental valuation approaches including discounted cash flow, relative valuation, and asset-based methods. The course emphasizes the estimation of cash flows, cost of capital, and risk assessment in valuation decisions. Special focus is given to valuation in mergers, acquisitions, restructuring, and strategic decision-making. On completion, students will be able to apply valuation models critically to real-world corporate and investment scenarios.

Course Objectives:

1. To develop a conceptual understanding of the role and importance of valuation in corporate finance.
2. To familiarize students with major valuation approaches such as discounted cash flow, relative valuation, and asset-based methods.
3. To enable students to estimate cash flows, cost of capital, growth, and risk for valuation purposes.
4. To apply valuation techniques in mergers, acquisitions, restructuring, and strategic decision-making.
5. To enhance analytical and critical thinking skills required for evaluating corporate value in real-world business contexts.

Course Outcomes:

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

CO1: Explain the concepts, objectives, and significance of corporate valuation in financial decision-making.

CO2: Apply various valuation approaches such as discounted cash flow, relative valuation, and asset-based methods.

CO3: Estimate cash flows, cost of capital, growth, and risk for valuing corporate entities.

CO4: Analyze valuation issues in mergers, acquisitions, restructuring, and strategic transactions.

CO5: Critically evaluate corporate valuation reports and justify valuation decisions in practical business situations.

MODULE 1	**Fundamentals of Corporate Valuation**	**08 Hours**

Meaning and objectives of valuation - Valuation vs pricing - Situations requiring valuation: M&A, IPO, buyback, restructuring, insolvency, taxation, litigation - Value concepts: Fair value, intrinsic value, market value, Strategic value, synergistic value, liquidation value - Determinants of corporate value -Overview of valuation approaches: Asset-based, Income-based, Market-based - Ethical issues and professional judgment in valuation – Overview of valuation requirements under Companies Act, SEBI (ICDR), FEMA

MODULE 2	**Asset-Based and Market-Based Valuation Approaches**	**12 Hours**

Asset-Based Valuation: Net Asset Value (NAV) method, Adjusted book value, Replacement cost method, Liquidation value

Market-Based Valuation: Comparable Companies Analysis (CCA), Valuation multiples: P/E, P/B, EV/EBITDA, EV/Sales - Selection of appropriate peers - Strengths and limitations of relative valuation.

MODULE 3	**Income-Based Valuation Models**	**14 Hours**

Discounted Cash Flow (DCF) framework, Free Cash Flow to Firm (FCFF), Free Cash Flow to Equity (FCFE), Dividend Discount Models (DDM): Zero growth, Constant growth (Gordon Model), Multi-stage growth models, Terminal value estimation, H-Model and declining growth models - Common pitfalls in DCF valuation.

MODULE 4	External Corporate Restructuring	12 Hours

Types – Mergers, Acquisitions, Take over, De-mergers (Split off and Spinoffs), Joint Ventures.
Mergers and Acquisitions: Meaning, Objectives, and Motives of M&A, Types of Mergers: Horizontal, Vertical, Conglomerate. Forms of Acquisitions and Takeovers: Mergers, Acquisitions, Takeovers, Spinoff, Synergies, Strategic Alliance, Joint Venture, Leveraged Buyouts, Management Buyouts (MBO) & Buy-in (MBI), Franchising, Intellectual Property Rights (IPRs), Sell-off, Demerger, Disinvestment v/s Divestment, Slump Sale, Reverse Merger, Equity Carve out, Un-levering and Re-levering.
Valuation of Target Firm, Financing of Mergers and Acquisitions, Determination of Exchange Ratio, Terms of Merger, Feasibility of Mergers.

MODULE 5	Advanced Valuation Applications & Contemporary Issues	14 Hours

Valuation for mergers and acquisitions, Synergy valuation: numerical problems on determination of exchange/ swap ratio, Pre & Post-merger EPS and shareholder wealth implications - Value-based performance measures: Economic Value Added (EVA) and Market Value Added (MVA) and their linkage with firm valuation - Valuation of startups and high-growth firms - Valuation of brands and intangibles - Valuation under distress and insolvency - Valuation adjustments under Ind AS / IFRS - Role of valuation in strategic decision-making - Limitations of valuation models. (Mini case / project on valuation of an Indian company)

SKILL DEVELOPMENT ACTIVITIES

- Preparation of a basic valuation report for a selected company using financial statements.
- Cash flow and cost of capital estimation exercise based on given corporate data.
- Comparative valuation activity using market multiples of peer companies.
- Case study analysis on valuation issues in mergers, acquisitions, or restructuring.
- Presentation and peer review of valuation assumptions and conclusions.

BOOKS FOR REFERENCE

1. Damodaran, A. (2024). Investment valuation: Tools and techniques for determining the value of any asset (4th ed.). Wiley.
2. Damodaran, A. (2018). The dark side of valuation: Valuing young, distressed, and complex businesses (3rd ed.). Pearson FT Press.
3. Chandra, P. (2017). Valuation: Techniques and applications. McGraw Hill Education.
4. Koller, T., Goedhart, M., Wessels, D., & McKinsey & Company Inc. (2025). Valuation: Measuring and managing the value of companies (8th ed.). Wiley.
5. Pratt, S. P., & Niculita, A. V. (2022). Valuing a business: The analysis and appraisal of closely held companies (6th ed.). McGraw Hill.
6. Koller, T., Goedhart, M., Wessels, D., & McKinsey & Company Inc. (2025). Valuation: Measuring and managing the value of companies, university edition (8th ed.). Wiley.
7. Brealey, R. A., Myers, S. C., Allen, F., & Edmans, A. (2022). Principles of corporate finance (14th ed.). McGraw Hill.
8. Pandey, I. M. (2026). Financial management (13th ed.). Pearson India.
9. CFA Institute. (2025). 2026 CFA Program curriculum: Level I. John Wiley & Sons.

E-Resources

1. SWAYAM – NPTEL ,Valuation and Creating Sustainable Value, Prof. Padmini Srinivasan
   Coursera (via University of Illinois), Corporate Finance and Valuation, Prof. Gautam Kaul
2. edX / Corporate Finance Institute, Financial Modeling & Valuation (FMVA) Prep (Free Modules),
3. Coursera ,Valuation: Measuring and Managing the Value of Companies
4. Udemy , Discounted Cash Flow Valuation Fundamentals

Name of the Course : Technical Analysis and Trading Strategies		
Course Code : 3.7	**Course Credits:** 2	**No. of Hours per week:** 3 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 45 Hrs.

Course Description:

This course provides an understanding of technical analysis and its application in financial markets. It covers price trends, chart patterns, technical indicators, volume analysis, trading strategies, risk management, and trading psychology. The course enables students to interpret market charts and formulate structured trading decisions using technical analysis.

Course Objectives:

1. To understand the principles, assumptions, and applications of technical analysis in financial markets.
2. To analyse price trends, support and resistance, candlestick patterns, and chart patterns.
3. To interpret technical indicators and volume-based signals for market analysis.
4. To understand and apply different technical trading strategies under varying market conditions.
5. To develop structured trading decisions incorporating risk management, trading psychology, and trade planning

Course Outcomes:

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

CO1: Explain the principles and theoretical foundations of technical analysis.
CO2: Identify and interpret price trends, support and resistance, candlestick patterns, and chart patterns.
CO3: Analyse market conditions using technical indicators and volume-based measures.
CO4: Apply appropriate technical trading strategies under different market conditions.
CO5: Formulate structured trading plans incorporating entry, exit, risk management, and trading discipline.

MODULE 1	**Foundations of Technical Analysis and Price Structure**	**08 Hours**

Meaning and Scope of Technical Analysis; Technical Analysis versus Fundamental Analysis; Assumptions of Technical Analysis; Dow Theory – Principles and Market Trends; Types of Charts – Line, Bar and Candlestick Charts; Time Frames; Price and Volume Data; Market Trends – Uptrend, Downtrend and Sideways Trend; Swing High and Swing Low; Trendlines; Channels; Support and Resistance; Role Reversal of Support and Resistance; Breakouts and False Breakouts; Gaps – Types and Interpretation.

MODULE 2	**Candlestick and Chart Pattern Analysis**	**12 Hours**

Candlestick Structure; Bullish and Bearish Candlesticks; Doji; Hammer and Hanging Man; Shooting Star and Inverted Hammer; Engulfing Patterns; Harami; Morning Star and Evening Star; Head and Shoulders; Inverse Head and Shoulders; Double Top and Double Bottom; Triple Top and Triple Bottom; Symmetrical, Ascending and Descending Triangles; Flags and Pennants; Wedges; Rectangles; Pattern Breakouts; Price Targets; Confirmation and Failure of Patterns.

MODULE 3	**Technical Indicators and Volume Analysis**	**14 Hours**

Moving Averages – Simple and Exponential; Moving Average Crossovers; Moving Average Convergence Divergence (MACD); Relative Strength Index (RSI); Stochastic Oscillator; Bollinger Bands; Average True Range (ATR); Average Directional Index (ADX); Overbought and Oversold Conditions; Bullish and Bearish Divergence; Leading and Lagging Indicators; Importance of Volume; Price–Volume Relationship; Volume Confirmation; On-Balance Volume (OBV); Volume Weighted Average Price (VWAP); Interpretation and Limitations of Technical Indicators.

MODULE 4	Trading Strategies	12 Hours

Concept and Components of a Trading Strategy; Trading Setup and Trade Trigger; Trend-Following Strategies; Breakout and Breakdown Strategies; Pullback Strategies; Support and Resistance-Based Strategies; Momentum Strategies; Mean-Reversion Strategies; Price Action Strategies; Range-Bound Trading Strategies; Multi-Timeframe Trading; Confluence-Based Trading; Strategy Selection for Trending and Range-Bound Markets; Entry and Exit Rules; Confirmation and Invalidation of Trade Setup; False Signals and Strategy Failure; Backtesting of Trading Strategies – Concept and Process.

MODULE 5	Risk Management, Trading Psychology and Trading Plan	12 Hours

Risk Management in Trading; Risk–Reward Ratio; Stop-Loss and Target Setting; Fixed, Technical and Trailing Stop-Loss; Position Sizing; Risk per Trade; Capital Allocation; Drawdown and Maximum Drawdown; Trading Costs and Slippage; Trading Psychology; Fear and Greed; Behavioural Biases in Trading; Trading Discipline and Overtrading; Trading Journal and Trade Review; Trading Plan – Entry, Exit and Risk Rules; Trading Performance Measures – Win Rate, Average Profit, Average Loss, Risk–Reward Ratio and Profit Factor; Review and Improvement of Trading Performance.

BOOKS FOR REFERENCE

1. Murphy, J. J. (1999). Technical analysis of the financial markets: A comprehensive guide to trading methods and applications. New York Institute of Finance.
2. Pring, M. J. (2014). Technical analysis explained: The successful investor's guide to spotting investment trends and turning points (5th ed.). McGraw Hill.
3. Kirkpatrick, C. D., II, & Dahlquist, J. R. (2016). Technical analysis: The complete resource for financial market technicians (3rd ed.). Pearson.
4. Nison, S. (2001). Japanese candlestick charting techniques: A contemporary guide to the ancient investment techniques of the Far East (2nd ed.). Prentice Hall Press.
5. Schwager, J. D. (1996). Technical analysis. Wiley.
6. Elder, A. (2014). The new trading for a living: Psychology, discipline, trading tools and systems, risk control, trade management. Wiley.
7. Bulkowski, T. N. (2021). Encyclopedia of chart patterns (3rd ed.). Wiley.

E-Resources

1. TradingView – Financial Market Charts
   https://www.tradingview.com/
2. StockCharts ChartSchool – Technical Analysis Learning Resources
   https://chartschool.stockcharts.com/
3. CMT Association – Technical Analysis Resources
   https://cmtassociation.org/

PRACTICAL COMPONENT – 30 MARKS

The practical component shall assess the student's ability to apply technical analysis concepts to a given financial market chart and formulate a structured trading decision. The assessment shall not involve programming, algorithmic trading, or automated strategy development.

The student shall be provided with a historical market chart containing the required price, volume, and technical indicator information.

Practical Assessment Pattern

Component	Marks
Chart Analysis and Application of Technical Tools	**15**
Trading Strategy, Trade Plan and Interpretation	**15**
Total	**30**

Name of the Course : Cyber Security in Financial Services		
Course Code : 4.1	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course introduces students to the principles of cyber security in the financial services sector and examines the growing cyber risks associated with digital banking, payment systems, financial technology, insurance, and capital markets. It covers cyber threats, security frameworks, digital payment security, data protection, regulatory compliance, cyber risk management, and emerging technologies in financial cyber security. The course equips students with the knowledge required to understand and manage cyber security challenges in modern financial institutions.

Course Objectives:

1. To understand the concepts, principles, and importance of cyber security in financial services.
2. To examine cyber threats, vulnerabilities, and security challenges affecting financial institutions.
3. To analyze cyber security frameworks, risk management practices, and regulatory requirements applicable to the BFSI sector.
4. To evaluate security mechanisms used in digital banking, payment systems, and financial technology platforms.
5. To assess emerging cyber security technologies and best practices for securing financial information systems.

Course Outcomes:

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

CO1: Explain the concepts, principles, and importance of cybersecurity in financial services.

CO2: Identify cyber threats, vulnerabilities, and security risks affecting banking, financial institutions, and FinTech organizations.

CO3: Analyze cybersecurity frameworks, digital payment security, and regulatory compliance requirements.

CO4: Evaluate cyber risk management practices, business continuity measures, and incident response strategies in financial institutions.

CO5: Assess emerging technologies, security trends, and ethical issues in financial cybersecurity.

MODULE 1	**Fundamentals of Cyber Security in Financial Services**	**12 Hours**

Introduction to Cyber Security; Evolution of Cyber Threats; Information Security Concepts; Confidentiality, Integrity and Availability (CIA Triad); Cyber Security Principles; Cyber Security in Banking, Financial Services and Insurance (BFSI); Digital Transformation and Cyber Risk; Cyber Threat Landscape in Financial Services; Types of Cyber Attacks—Malware, Ransomware, Phishing, Social Engineering, Insider Threats, Distributed Denial of Service (DDoS) Attacks; Financial Fraud and Cybercrime; Cyber Security Awareness and Best Practices.

MODULE 2	**Fundamentals of Cyber Security in Financial Services**	**12 Hours**

Cyber Security in Digital Banking; Internet Banking Security; Mobile Banking Security; ATM Security; Payment Gateway Security; Unified Payments Interface (UPI) Security; Card Payment Security; Digital Wallet Security; Electronic Payment Systems; FinTech Security Challenges; Blockchain Security Concepts; Cryptocurrency Risks; Cloud Computing in Financial Services; Identity and Access Management (IAM); Multi-Factor Authentication (MFA); Secure Authentication Mechanisms.

MODULE 3	**Cyber Risk Management and Regulatory Compliance**	**12 Hours**

Cyber Risk Management Frameworks; Risk Assessment and Risk Mitigation; Enterprise Risk Management in Financial Institutions; Cyber Security Governance; Security Policies and Standards; Data Privacy and Data Protection; Information Security Management Systems (ISMS); ISO/IEC 27001

Framework; RBI Cyber Security Framework; Reserve Bank of India Guidelines on Digital Banking Security; Payment Card Industry Data Security Standard (PCI DSS); Data Protection Regulations; Incident Reporting and Compliance Requirements.

MODULE 4	Cyber Incident Response and Business Continuity	12 Hours

Cyber Incident Management; Security Operations Centre (SOC); Incident Detection and Response; Digital Forensics; Cyber Threat Intelligence; Fraud Detection Systems; Business Continuity Planning; Disaster Recovery Planning; Backup and Recovery Strategies; Cyber Crisis Management; Third-Party Risk Management; Vendor Risk Management; Cyber Insurance; Case Studies on Cyber Incidents in Banking and Financial Services.

MODULE 5	Emerging Trends in Financial Cyber Security	12 Hours

Artificial Intelligence in Cyber Security; Machine Learning for Fraud Detection; Behavioural Analytics; Zero Trust Security Model; Cloud Security; Internet of Things (IoT) Security in Financial Services; Quantum Computing and Cyber Security; Cyber Security Challenges in Open Banking; Cyber Security in Central Bank Digital Currency (CBDC); Ethical Issues in Cyber Security; Future Trends in Financial Cyber Security.

SKILL DEVELOPMENT ACTIVITIES

- Analyze a recent cyber attack on a bank, financial institution, or FinTech company and identify its causes, impact, and preventive measures.
- Evaluate the cyber security features of digital banking applications, payment gateways, or mobile wallet platforms.
- Study RBI guidelines and cyber security regulations applicable to banks and financial institutions and prepare a compliance report.
- Prepare a cyber risk assessment report for a financial institution by identifying potential threats, vulnerabilities, and mitigation measures.
- Present a case study on emerging technologies such as Artificial Intelligence, Block chain, Zero Trust Architecture, or Cloud Security in financial cyber security.

BOOKS FOR REFERENCE

1. Whitman, M. E., & Mattord, H. J. (2022). *Principles of Information Security*. Cengage Learning.
2. Peltier, T. R. (2016). *Information Security Fundamentals*. CRC Press.
3. Vacca, J. R. (2017). *Computer and Information Security Handbook* (3rd Edition). Elsevier.
4. Stallings, W., & Brown, L. (2018). *Computer Security: Principles and Practice* (4th Edition). Pearson.
5. Chander, H., & Sharma, M. (2022). *Cyber Security and Digital Banking*. BPB Publications.

E-Resources

1. **SWAYAM (NPTEL)** – Cyber Security and Information Security courses.
2. **Reserve Bank of India (RBI)** – Guidelines on Cyber Security, Digital Banking Security, and Payment Systems.
3. **CERT-In (Indian Computer Emergency Response Team)** – Cyber Security Advisories and Best Practices.
4. **National Institute of Standards and Technology (NIST)** – Cyber Security Framework and Risk Management Resources.
5. **ISACA** – Resources on Information Security Governance and Cyber Risk Management.
6. **IBM Security Learning Academy** – Cyber Security Fundamentals and Financial Security Resources.

Name of the Course : FinTech Regulation and Compliance		
Course Code : 4.2	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course provides an understanding of the regulatory and compliance framework governing FinTech and digital financial services. It covers the regulation of digital payments, lending, investment platforms, KYC and AML compliance, consumer protection, data governance, and emerging FinTech regulatory issues, with particular reference to India.

Course Objectives:

Upon successful completion of this course, the students will be able to:

1. To understand the regulatory framework governing FinTech and digital financial services.
2. To examine regulations applicable to digital payments, lending, investment, and other FinTech activities.
3. To understand KYC, Anti-Money Laundering, and financial compliance requirements.
4. To analyse consumer protection, data governance, and compliance responsibilities of FinTech firms.
5. To evaluate emerging regulatory developments and compliance challenges in the FinTech ecosystem.

Course Outcomes:

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

CO1: Explain the regulatory architecture governing FinTech and digital financial services.
CO2: Analyse regulatory requirements applicable to digital payments, lending, and investment-related FinTech services.
CO3: Explain KYC, AML, customer due diligence, and financial compliance requirements.
CO4: Evaluate consumer protection, data governance, and compliance practices of FinTech firms.
CO5: Analyse emerging regulatory developments and compliance challenges affecting the FinTech industry.

MODULE 1	**FinTech Regulatory Framework**	**10 Hours**

Meaning and Need for FinTech Regulation; Objectives and Principles of Financial Regulation; FinTech Regulatory Ecosystem in India; Role of Reserve Bank of India (RBI); Securities and Exchange Board of India (SEBI); Insurance Regulatory and Development Authority of India (IRDAI); International Financial Services Centres Authority (IFSCA); Ministry of Finance; Regulatory Jurisdiction over FinTech Activities; Principle-Based and Rule-Based Regulation; Activity-Based and Entity-Based Regulation; Regulatory Sandbox – Concept and Purpose; Self-Regulatory Organizations in FinTech; Regulatory Challenges arising from Financial Innovation.

MODULE 2	**Regulation of Digital Payments and Digital Lending**	**14 Hours**

Regulatory Framework for Payment Systems in India; Payment and Settlement Systems Act, 2007 – Overview; Payment System Operators; Prepaid Payment Instruments; Payment Aggregators and Payment Gateways; Regulation of Digital Payment Services; Customer Protection in Digital Payments; Unauthorized Electronic Transactions; Digital Lending – Concept and Participants; RBI Digital Lending Regulatory Framework; Regulated Entities and Lending Service Providers; Digital Lending Apps; Loan Disbursement and Repayment; Disclosure of Loan Terms and Key Fact Statement; Digital Lending Practices and Customer Protection; Default Loss Guarantee – Concept and Regulatory Treatment; Peer-to-Peer Lending – Regulatory Overview.

MODULE 3	**Regulation of FinTech-Based Financial Services**	**12 Hours**

Regulation of Investment-Based FinTech Services; Online Investment Platforms; Digital Broking and Investment Services; Robo-Advisory – Regulatory Perspective; Investment Advisers and Research Analysts – Regulatory Overview; Online Bond Platforms – Concept and Regulation; Alternative Investment and Fund-Raising Platforms – Regulatory Overview; Account Aggregator

Framework; Consent-Based Financial Data Sharing; Open Finance – Regulatory Perspective; InsurTech – Regulatory Overview; FinTech Partnerships with Regulated Financial Institutions; Outsourcing of Financial Services – Regulatory Perspective.

MODULE 4	KYC, AML and FinTech Compliance	14 Hours

Concept and Importance of Regulatory Compliance; Compliance Function in Financial Institutions and FinTech Firms; Know Your Customer (KYC); Customer Identification and Verification; Customer Due Diligence (CDD); Enhanced Due Diligence (EDD); Digital KYC; Video-Based Customer Identification Process; Central KYC Records Registry; Anti-Money Laundering (AML); Prevention of Money Laundering Act – Overview; Money Laundering Process; Suspicious Transaction Monitoring; Suspicious Transaction Reports; Record-Keeping Requirements; Financial Intelligence Unit – India; Risk-Based Approach to AML Compliance; Sanctions Screening – Concept; Compliance Monitoring; Regulatory Reporting; Role of RegTech in Compliance Management.

MODULE 5	Consumer Protection, Data Governance and Emerging Regulation	10 Hours

Consumer Protection in Digital Financial Services; Fair Practices and Transparency; Disclosure Requirements; Grievance Redressal; RBI Integrated Ombudsman Scheme – Overview; Data Governance in FinTech; Customer Consent and Purpose Limitation; Digital Personal Data Protection Framework – Overview; Data Fiduciary and Data Principal – Concepts; Data Sharing in Financial Services; Third-Party and Outsourcing Compliance; Regulatory Issues relating to Artificial Intelligence in Financial Services; Algorithmic Accountability – Concept; Regulatory Issues in Embedded Finance and Platform-Based Financial Services; Cross-Border FinTech – Regulatory Challenges; Regulatory Technology (RegTech) and Supervisory Technology (SupTech); Emerging Trends in FinTech Regulation.

SKILL DEVELOPMENT ACTIVITIES

- Prepare a regulatory map of the Indian FinTech ecosystem, identifying the roles of RBI, SEBI, IRDAI and IFSCA.
- Analyse the regulatory requirements applicable to a selected digital lending or digital payment service.
- Prepare a simplified KYC and AML compliance checklist for a FinTech firm.
- Analyse a case involving consumer protection or regulatory non-compliance in digital financial services.
- Examine a recent RBI, SEBI, IRDAI or IFSCA regulatory development affecting FinTech firms and discuss its implications.

BOOKS FOR REFERENCE

1. Chishti, S., Craddock, T., Courtneidge, R., & Zachariadis, M. (Eds.). (2020). The PAYTECH book: The payment technology handbook for investors, entrepreneurs and FinTech visionaries. Wiley.
2. Chishti, S., & Barberis, J. (Eds.). (2016). The FINTECH book: The financial technology handbook for investors, entrepreneurs and visionaries. Wiley.
3. Arner, D. W., Barberis, J. N., & Buckley, R. P. (2017). FinTech, RegTech, and the reconceptualization of financial regulation. Northwestern Journal of International Law & Business, 37, 371–414.
4. Alexander, K. (2019). Principles of banking regulation. Cambridge University Press.
5. International Compliance Association. Governance, risk and compliance: Study materials. International Compliance Association.Reserve Bank of India (RBI) – Current Master Directions, Directions, Master Circulars, Circulars, Notifications, Guidelines and Regulatory Publications relevant to FinTech, digital payments, digital lending, KYC, AML and financial services.
6. Securities and Exchange Board of India (SEBI) – Current Regulations, Master Circulars,

Circulars, Guidelines and Regulatory Publications relating to securities markets and FinTech-enabled investment services.

7. Insurance Regulatory and Development Authority of India (IRDAI) – Current Regulations, Master Circulars, Guidelines and Regulatory Publications relating to InsurTech and digital insurance services.
8. International Financial Services Centres Authority (IFSCA) – Current Regulations, Circulars, Guidelines and Regulatory Publications relating to FinTech and financial services.

E-Resources:

1. Reserve Bank of India (RBI) – Regulations, Master Directions and Notifications
   https://www.rbi.org.in/
2. International Financial Services Centres Authority (IFSCA)
   https://ifsca.gov.in/
3. Financial Intelligence Unit – India (FIU-IND)
   https://fiuindia.gov.in/
4. Ministry of Finance – Department of Financial Services
   https://financialservices.gov.in/

Name of the Course : Sustainable Finance and ESG		
Course Code : 4.3	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

This course provides an understanding of sustainable finance and Environmental, Social and Governance (ESG) principles in financial and business decision-making. It covers sustainable financial instruments, ESG investing, climate and sustainability risks, ESG assessment, reporting, and the evolving sustainable finance framework in India and globally.

Course Objectives:

1. To understand the concepts and principles of sustainable finance and ESG.
2. To examine the role of financial institutions and markets in promoting sustainable development.
3. To understand sustainable financial instruments and sources of sustainable finance.
4. To analyse ESG factors in investment and financial decision-making.
5. To examine ESG reporting, sustainability disclosure, and emerging developments in sustainable finance.

Course Outcomes:

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

CO1: Explain the concepts, principles, and significance of sustainable finance and ESG.
CO2: Analyse the role of financial institutions and markets in financing sustainable development.
CO3: Evaluate major sustainable financial instruments and financing mechanisms.
CO4: Analyse ESG factors and their application in investment and financial decision-making.
CO5: Evaluate sustainability reporting, ESG disclosures, and emerging developments in sustainable finance.

MODULE 1	**Foundations of Sustainable Finance and ESG**	**10 Hours**

Sustainable Development – Concept and Significance; United Nations Sustainable Development Goals (SDGs) – Overview; Sustainable Finance – Meaning, Scope and Principles; Evolution of Sustainable Finance; Traditional Finance versus Sustainable Finance; Environmental, Social and Governance (ESG) – Concept and Components; Environmental Factors; Social Factors; Governance Factors; ESG versus Corporate Social Responsibility (CSR); Stakeholders in Sustainable Finance; Role of Financial Markets in Sustainable Development; Sustainable Finance in India – Overview.

MODULE 2	**Sustainable Financial System and Climate Finance**	**12 Hours**

Role of Banks and Financial Institutions in Sustainable Finance; Sustainable Banking; Responsible Banking; Green Banking; Sustainable Lending; Environmental and Social Considerations in Lending; Climate Finance – Concept and Importance; Climate Change and Financial System; Physical and Transition Risks; Climate-Related Financial Risks; Financing Renewable Energy and Sustainable Infrastructure; Development Finance Institutions and Sustainable Development; Role of Multilateral Financial Institutions; Carbon Markets – Concept and Role in Sustainable Finance; Transition Finance – Concept.

MODULE 3	**Sustainable Financial Instruments**	**14 Hours**

Green Finance – Concept and Scope; Green Bonds; Social Bonds; Sustainability Bonds; Sustainability-Linked Bonds; Green Loans; Sustainability-Linked Loans; Transition Bonds – Concept; ESG Funds; Sustainable Mutual Funds; Impact Investing; Socially Responsible Investing; Green and Sustainable Infrastructure Financing; Sustainable Project Finance; Green Bond Principles – Overview; Use of Proceeds and Sustainability Performance Targets; Benefits and Risks of Sustainable Financial Instruments; Greenwashing – Concept and Implications.

MODULE 4	ESG Analysis and Sustainable Investment	12 Hours

ESG Investing – Concept and Approaches; ESG Integration; Negative and Exclusionary Screening; Positive and Best-in-Class Screening; Thematic Investing; Impact Investing; ESG Factors in Investment Analysis; Material ESG Factors; ESG Risk and Financial Performance; ESG Ratings and Scores; ESG Rating Agencies – Role and Limitations; ESG Data and Information Sources; ESG Due Diligence; ESG and Portfolio Decision-Making; Stewardship and Shareholder Engagement; Challenges in ESG Investment Analysis.

MODULE 5	ESG Reporting, Disclosure and Emerging Developments	12 Hours

Sustainability Reporting – Concept and Importance; ESG Disclosure; Financial versus Sustainability Reporting; Global Reporting Initiative (GRI) – Overview; International Sustainability Standards Board (ISSB) Standards – Overview; IFRS S1 and IFRS S2 – Conceptual Overview; Business Responsibility and Sustainability Reporting (BRSR) in India; BRSR Core – Overview; Role of SEBI in ESG Disclosure; Climate-Related Financial Disclosures; Materiality in Sustainability Reporting; Assurance of Sustainability Information – Concept; Greenwashing and Misleading Sustainability Claims; ESG Regulation – Indian and Global Developments; Challenges in ESG Reporting and Comparability; Emerging Trends in Sustainable Finance.

SKILL DEVELOPMENT ACTIVITIES

- Analyse the ESG initiatives of a selected listed company under Environmental, Social and Governance dimensions.
- Compare a green bond with a conventional bond based on purpose, use of proceeds, and sustainability characteristics.
- Examine the BRSR of a selected Indian listed company and identify major ESG disclosures.
- Compare the ESG performance of two selected companies using publicly available ESG information.
- Analyse a case of greenwashing or misleading sustainability claims and identify its implications for investors and stakeholders.

BOOKS FOR REFERENCE

1. Schoenmaker, D., & Schramade, W. (2019). Principles of sustainable finance. Oxford University Press.
2. Krosinsky, C., & Purdom, S. (Eds.). (2016). Sustainable investing: Revolutions in theory and practice. Routledge.
3. Boffo, R., & Patalano, R. (2020). ESG investing: Practices, progress and challenges. OECD Publishing. https://doi.org/10.1787/b4f71091-en
4. CFA Institute. (2025). Certificate in ESG Investing: Curriculum. CFA Institute.
5. Krosinsky, C., & Robins, N. (Eds.). (2008). Sustainable investing: The art of long-term performance. Earthscan. International Finance Corporation. Sustainable Finance and Banking Publications. World Bank Group.
6. Current standards, frameworks, regulatory directions, circulars, guidelines and official publications issued by SEBI, RBI, Ministry of Finance, Ministry of Corporate Affairs, IFRS Foundation/ISSB, GRI, OECD and other relevant authorities shall be treated as essential reading alongside the prescribed textbooks.

E-Resources

1. Securities and Exchange Board of India (SEBI) – ESG, BRSR and Sustainable Finance
   https://www.sebi.gov.in/
2. Reserve Bank of India (RBI) – Sustainable Finance and Climate Risk
   https://www.rbi.org.in/
3. International Sustainability Standards Board (ISSB) / IFRS Foundation
   https://www.ifrs.org/sustainability/

4. Global Reporting Initiative (GRI)
   https://www.globalreporting.org/
5. United Nations Principles for Responsible Investment (PRI)
   https://www.unpri.org/
6. United Nations Sustainable Development Goals
   https://sdgs.un.org/goals
7. International Finance Corporation (IFC) – Sustainable Finance
   https://www.ifc.org/
8. World Bank – Climate and Sustainable Finance
   https://www.worldbank.org/
9. OECD – Sustainable Finance
   https://www.oecd.org/
10. Climate Bonds Initiative
    https://www.climatebonds.net/

Name of the Course : Project Management		
Course Code : 4.4	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

Project Management is a comprehensive understanding of the principles, tools, and techniques involved in planning, executing, monitoring, and controlling projects. The course focuses on the strategic and managerial aspects of projects, including project identification, feasibility analysis, project planning, scheduling, resource allocation, budgeting, risk management, quality management, and project evaluation. It also develops students' ability to apply project management techniques to business, financial, and entrepreneurial projects. Emphasis is placed on practical applications, decision-making, teamwork, leadership, and the use of modern project management tools for successful project completion.

Course Objectives:

1. Understand project management concepts and frameworks.
2. Plan, execute, monitor and control projects.
3. Apply project management tools for business, finance and consulting projects.
4. Manage project risks, quality, stakeholders and resources.
5. Understand Agile, Hybrid and Digital Project Management.
6. Use AI and analytics in project planning and monitoring

Course Outcomes:

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

CO1: Explain the concepts, principles, characteristics, and importance of project management in business organizations.

CO2: Identify and evaluate project opportunities through project formulation, feasibility analysis, and project appraisal.

CO3: Apply project planning and scheduling techniques such as **Work Breakdown Structure (WBS), Gantt charts, PERT, and CPM** for effective project execution.

CO4: Analyze project costs, budgets, resources, and financial requirements and make appropriate managerial decisions.

CO5: Apply project management concepts and techniques to real-world business and organizational projects

MODULE 1	**Project Management Foundations and Project Initiation**	**14 Hours**

Introduction to Project Management, Characteristics of Projects, Project Life Cycle, Project Management Process Groups, Project Management Knowledge Areas, Strategic Importance of Project Management, Project Selection Techniques, Project Feasibility Analysis (Technical, Financial, Economic, Operational, Legal) Business Case Preparation, Project Charter, Project Governance, Project Management Office (PMO), Project Portfolio Management, Program Management, Role of Project Manager, Leadership and Ethics in Project Management, Traditional, Agile and Hybrid Project Management (Introduction).
Practical - Prepare Project Charter, Feasibility Study, Project Selection Case Study

MODULE 2	**Project Planning and Scheduling**	**12 Hours**

Scope Management - Scope Statement, Work Breakdown Structure (WBS), Responsibility Assignment Matrix (RAM), Organizational Breakdown Structure (OBS), Project Scheduling, Gantt Charts, Network Analysis – CPM, PERT, Critical Chain Method (Concept), Resource Allocation, Resource Levelling, Cost Estimation, Project Budgeting, Procurement Planning, Microsoft Project / Primavera (Conceptual Overview), AI-assisted Project Planning.
Practical - WBS preparation, CPM & PERT Problems, Gantt Chart, Resource Allocation Exercise

MODULE 3	Project Execution, Monitoring and Risk Management	12 Hours

Project Execution - Team Formation, Team Leadership, Communication Management, Stakeholder Management, Conflict Resolution, Project Monitoring and Control, Earned Value Management (EVM), Performance Measurement, Project Risk Management, Risk Identification, Risk Assessment, Risk Matrix, Risk Response Strategies, Contingency Planning, Change Management, Project Documentation.
Practical - Risk Register, Stakeholder Analysis, Earned Value Problems , Project Dashboard

MODULE 4	Project Quality, Procurement and Closure	10 Hours

Project Quality Management - Quality Planning, Quality Assurance, Quality Control, Continuous Improvement, Procurement Management, Vendor Selection, Contract Management, Types of Project Contracts, Project Audits, Project Closure, Post-Implementation Review, Lessons Learned, Knowledge Management, Project Documentation, Project Success and Failure Factors.
Practical - Quality Audit Checklist, Procurement Evaluation, Project Closure Report.

MODULE 5	Contemporary Project Management	12 Hours

Agile Project Management - Scrum Framework, Kanban, Hybrid Project Management, Lean Project Management, Digital Project Management, AI in Project Management, Data Analytics for Project Monitoring, Dashboard Reporting, Sustainability in Projects, ESG in Project Management, Industry 4.0 Projects, ERP Implementation Projects, Business Process Reengineering Projects, Virtual Project Teams, Global Project Management, Emerging Trends in Project Management.
Practical - Agile Project Simulation, Scrum Sprint Planning, Dashboard Preparation, Digital Transformation Case Study

SKILL DEVELOPMENT ACTIVITIES

- Prepare a Project Charter.
- Conduct a Project Feasibility Study.
- Develop a Work Breakdown Structure.
- Prepare Gantt Charts.
- Solve CPM and PERT problems.
- Develop Project Budgets.
- Prepare a Risk Register.
- Conduct Stakeholder Analysis.
- Prepare an Earned Value Management report.
- Design a Project Dashboard.
- Prepare a Project Closure Report.
- Present a live project case study.

BOOKS FOR REFERENCE

1. Gray, C. F., & Larson, E. W. (2021). Project management: The managerial process (8th ed.). McGraw Hill.
2. Meredith, J. R., Shafer, S. M., & Mantel, S. J., Jr. (2017). Project management: A managerial approach (9th ed.). Wiley.
3. Kerzner, H. (2022). Project management: A systems approach to planning, scheduling, and controlling (13th ed.). Wiley.
4. Chandra, P. (2019). *Projects:* Planning, analysis, selection, financing, implementation, and review (9th ed.). McGraw Hill Education.
5. Larson, E. W., Gray, C. F., Sirisomboonsuk, P., & Joshi, R. (2025). Project management: A socio-technical approach (9th ed.). McGraw Hill.
6. Meredith, J. R., Shafer, S. M., & Mantel, S. J., Jr. (2021). Project management: A managerial approach (11th ed.). Wiley.
7. Kerzner, H. (2025). Project management: A systems approach to planning, scheduling, and controlling (14th ed.). John Wiley & Sons.

8. Chandra, P. (2023). Projects: Planning, analysis, selection, financing, implementation, and review (10th ed.). McGraw Hill Education.

E-Resources

1. PMI – Project Management Institute – Project management standards, frameworks, articles, and professional resources
2. MIT OpenCourseWare – Free course materials covering management, operations, and related subjects.
3. NPTEL – Indian higher-education lectures and courses on project management, operations, finance, and management.
4. SWAYAM – Online courses and learning materials from Indian universities and institutions.
5. Microsoft Project resources – Tutorials and guidance for project planning, scheduling, and resource management

Name of the Course : International Taxation		
Course Code : 4.5	**Course Credits:** 4	**No. of Hours per week:** 4 Hrs.
CIE : 30 **SEE :** 70	**Total Marks :** 100	**Total No. of Teaching Hours:** 60 Hrs.

Course Description:

International Taxation is an advanced course that provides a comprehensive understanding of the principles and practices governing taxation of cross-border transactions. The course covers international tax systems, tax treaties, transfer pricing, taxation of non-residents, Double Taxation Avoidance Agreements (DTAAs), Base Erosion and Profit Shifting (BEPS), OECD guidelines, and emerging developments in global taxation. It equips students with the knowledge to analyze international tax issues, ensure compliance with tax regulations, and develop tax-efficient strategies for multinational business operations.

Course Objectives:

1. Understand the concepts, principles, and legal framework of international taxation.
2. Examine the taxation of cross-border transactions and the application of Double Taxation Avoidance Agreements (DTAAs).
3. Apply transfer pricing principles and international tax regulations to multinational business operations.
4. Analyze global tax initiatives, including BEPS, OECD guidelines, and emerging international tax reforms.
5. Develop tax planning strategies that ensure compliance while optimizing tax efficiency in international business.

Course Outcomes:

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

CO1: Explain the concepts, principles, and regulatory framework governing international taxation.
CO2: Apply the provisions relating to taxation of non-residents, cross-border transactions, and Double Taxation Avoidance Agreements (DTAAs).
CO3: Analyze transfer pricing issues and evaluate international tax implications for multinational enterprises.
CO4: Assess the impact of global tax initiatives such as BEPS, OECD guidelines, and international tax reforms on business decisions.
CO5: Develop tax-efficient and legally compliant strategies for international business operations and cross-border investments.

MODULE 1	**Taxation of non-residents**	**12 Hours**

Residential status provisions and incidence of tax in case of non-residents, special provisions of taxability of payment of dividend, royalty, Withholding tax provisions, Tax Residency Certificate (TRC) – Requirement for availing DTAA benefits in India, fees for technical services etc. to non-residents, withholding tax provisions, Certificate of No Permanent Establishment (No PE Certificate) for business remittances, Taxpayer Identification Number (TIN) of the country of residence for DTAA benefits., Compliance requirements for foreign remittances – Forms 145 and 146 under the Income-tax Act, 2025

MODULE 2	**An Overview of International Taxation**	**14 Hours**

Concept of International Taxation, International Tax Conflicts and Double Taxation, Double Taxation Relief under the Income-tax Act, 2025 – **Sections 159 & 160,** Double Tax Treaties, Domestic Tax Systems, International Offshore Financial Centres, Anti – avoidance Measures.

Principles of International Tax Law: International Tax Law, Application and Interpretation of Tax Treaties, Legal Systems and Treaty Interpretations, Model Tax Conventions, Bilateral Tax Treaties, Multilateral Tax Agreements, European Union, Harmful Tax Competition, Special Provisions relating to Avoidance of Tax – **Sections 161 to 177,** General Anti-Avoidance Rules (GAAR) – **Sections 178 to 184,**

Harmful Tax Competition, Mutual Agreement Procedure (MAP), Base Erosion and Profit Shifting (BEPS), Multilateral Instrument (MLI).

MODULE 3	Model Tax Conventions on Double Tax Avoidance	12 Hours

Comparison of the model conventions: OECD Model convention of Income and Capital (OECD MC), UN Model Convention (UN MC), U.S. Model Convention (US MC),Comparative analysis of OECD, UN and U.S. Model Conventions, Articles in the Model Conventions, keeping in view the UN convention (Article 1 to 31), Application of treaty provisions and treaty interpretation through model conventions .

MODULE 4	Basic International Tax Structures	10 Hours

International Tax Structures, Tax structuring for Cross-border Transactions, International Tax structuring for Expatriate Individuals, Avoidance of Economic Double Taxation of Dividends, Tax Consolidation Rules (Group Taxation), Advance Rulings under the Income-tax Act, 2025 – **Sections 380 to 389,** FATCA (Foreign Account Tax Compliance Act – USA) Declaration and international tax information reporting.

MODULE 5	International Tax - Transfer Pricing	12 Hours

Concept of Transfer Pricing, Historical background, International Transactions, Associated Enterprises Relationship, Arms-length Principle –Article 9 of OECD/UN TP Model, Methods of Transfer pricing, Functional Analysis, Asset Analysis, Risk Analysis, Economic Analysis, Selection of Most appropriate method, Comparability adjustments, Transfer pricing controversies.

SKILL DEVELOPMENT ACTIVITIES

- Analyze the provisions of a Double Taxation Avoidance Agreement (DTAA) between India and another country and present its practical implications.
- Prepare a transfer pricing documentation report for a hypothetical multinational enterprise using OECD guidelines.
- Conduct a comparative study of corporate tax systems in India and selected foreign countries.
- Analyze recent judicial decisions or amendments in international taxation and present their implications through seminars.

BOOKS FOR REFERENCE

1. Singhania, V. K., & Singhania, M. (2025). Students' guide to income tax including international taxation (2025–26 ed.). Taxmann.
2. Jain, A. (2025). International taxation. Taxmann.
3. Garg, K. (2024). Guide to international taxation. Bharat Law House.
4. Mittal, D. P. (2024). Law of transfer pricing in India. Taxmann.
5. Vijayasarathy, D., & Sundara Rajan, T. K. (2025). Transfer pricing: Domestic & international transactions (7th ed.). Bharat Law House.
6. Arnold, B. J. (2023). International tax primer (4th ed.). Kluwer Law International.
7. Rohatgi, R. (2007). Basic international taxation (2nd ed.). Kluwer Law International.
8. Organisation for Economic Co-operation and Development. (2025). Model tax convention on income and on capital: Condensed version 2025. OECD Publishing.
9. Organisation for Economic Co-operation and Development. (2022). OECD transfer pricing guidelines for multinational enterprises and tax administrations 2022. OECD Publishing.
10. United Nations. (2021). United Nations model double taxation convention between developed and developing countries: 2021 update. United Nations.
11. International Bureau of Fiscal Documentation. (2024). International tax glossary (8th ed.). IBFD.
12. Institute of Chartered Accountants of India. (2025). International taxation: Study material. ICAI.

E-Resources

1. SWAYAM. *Income Tax Law & Practice*. CEC, Government of India. https://swayam.gov.in/
2. SWAYAM – IGNOU. *BCOC-136: Income Tax Law and Practice*. https://swayam.gov.in/
3. NPTEL – ICMAI. *Introduction to GST*. https://www.nptel.ac.in/courses/110106512
4. NPTEL – NALSAR University of Law. *Law of Dispute Resolution in International Trade*. https://swayam.gov.in/
5. NPTEL – NALSAR University of Law. *International Investment Law and the Environment*. https://swayam.gov.in/
6. Organisation for Economic Co-operation and Development (OECD). *Taxation and International Tax Resources*. https://www.oecd.org/tax/
7. Organisation for Economic Co-operation and Development (OECD). *Transfer Pricing Guidelines*. https://www.oecd.org/en/topics/transfer-pricing.html
8. United Nations. *United Nations Tax Committee – International Taxation Resources*. https://financing.desa.un.org/what-we-do/ECOSOC/tax-committee
9. International Bureau of Fiscal Documentation (IBFD). *International Tax Academy and Tax Research Resources*. https://www.ibfd.org/
10. Reserve Bank of India. *Taxation, Foreign Exchange and Regulatory Publications*. https://www.rbi.org.in/

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