

BENGALURU CITY UNIVERSITY

CHOICE BASED CREDIT SYSTEM (as per SEP 2024)

Syllabus for I & II Semester B.Com (Fintech)

2024-25



Proceedings of BOS Meeting

Proceedings of the BOS meeting for UG-B.COM (Regular), B.COM(FINTECH), B.COM AEDP (BFSI), B.Com AEDP(ROM),B.COM(BDA), B.Com (A&F), B.Com (LSCM), B.VOC(A&T), BBA, BBA(Aviation Management), BBA(Business Analytics), programmes as per the SEP structure for the Academic Year 2024-25 held on 3rd and 4th July 2024 in the Department of Studies and Research in Commerce, PK Block, Bengaluru City University, Bengaluru-560009.

The board has reviewed and approved the course matrix for 1st Semester to 6th Semester and syllabus for 1st and 2nd semesters of the above mentioned courses. The board authorized the Chairman to make the necessary changes.

1.	Prof. Jalaja .K.R	Dean and Chairperson, Department Of	Chairperson
		Commerce, BCU	
2.	Dr.R. Sarvamangala	Dean And Chairperson, Department Of	Member
		Commerce, BUB	
3.	Dr. Nagaraju.N	Professor, Department Of	Member
		Commerce, University of Mysore	
4.	Dr. B.G.Baskar	Principal, Seshadripuram College,	Member
		Bengaluru	
5.	Dr. Padmaja.P.V	Principal, MLA Academy Of Higher	Member
		Education, Bengaluru	
6.	Dr. Parvathi	Principal, VET First Grade College,	Member
		Bengaluru	
7.	Dr. Raja Jebasingh	Vice-Principal, St.Joseph's College of	Member
		Commerce(Autonomous)	
8	Dr.K.Ramachandra	Professor, Department Of	Member
		Commerce, Maharani Cluster	
		University.	

MEMBERS PRESENT:

Co-Opted Members Present

9	Prof.Ritika Sinha	Chairperson, Department of Management, Bengaluru City University	Member
10	Prof.G.Venugopal	Principal VVN Degree College, Bengaluru	Member
11	Dr.Savita. K	Principal, BEL First Grade College, Bengaluru	Member



12	Dr.Bhavani.H	Associate Professor, Department Of Commerce, Vivekananda Degree College ,Bengaluru	Member
13	Mr. H.N Gururaja Rao.	Associate Professor, Department Of Commerce, Vijaya College, Bengaluru	Member
14	Dr.Swamynathan.C	Associate Professor, Department of Commerce, GFGC Malleshwaram College, Bengaluru	Member
15	Prof.H R Padmanabha	Vice-Principal, Sai Vidya First Grade College, Yelahanka.	Member
16	Dr.Srihari	Associate Professor, Department Of Commerce, SSMRV College, Bengaluru	Member
17	Dr.Nagaraja.C	Assistant Professor, Department Of Commerce, GFGC Yalahanka College ,Bengaluru	Member
18	Smt.Asha.N	Assistant Professor, Department Of Commerce, Sindhi Degree College, Bengaluru	Member
19	Mr.Sharath M	Assistant Professor, Sindhi College.	Member
Indu	istry Experts	1	1
20	CMA .Geetha Sauthanagopalan	Partner GM Associates, Bangalore.	Member
21	CMA .Abhijeet S Jain	Chairman, Bengaluru Chapter of the Institute of Cost Accountants of India	Member
22	Mr. G Vijay Raghavan	Founder- Stockathon Academy, Bangalore	Member

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Dr. JALAJA. K R, M.COM., MBA., Ph.D Dean & Chairperson Department of Commerce Bengaluru City University



REGULATIONS PERTAINING TO B.COM (FINTECH)

As per SEP- CBCS Scheme - 2024-25 onwards

1. INTRODUCTION

As per the Government Order No. ED 166 UNE 2023, Bangalore, dated 08.05.2024, all Universities in Karnataka, are required to revise the curriculum of Degree Programs as per the guidelines of the Karnataka State Higher Education Council and State Education Planning Commission, constituted by the government, from the academic year 2024-2025.

In furtherance of the said Government order, the Program Structure prepared by the BOS will be applicable to students admitted to B.Com (FINTECH) Program, offered by Bengaluru City University affiliated colleges, Constituent Colleges and Department of Commerce, Bengaluru City University.

Therefore, this regulation will be applicable to all students seeking admission for B.COM (FINTECH) Programme from the academic year 2024-25.

The Board of Studies resolved to provide the regulation for B.Com (FINTECH) Undergraduate Program along with Framework and Syllabus for the various Discipline Specific Core Courses and Discipline Specific Elective Courses for each semester.

2. PROGRAM OBJECTIVES:

- 1. To create manpower for global middle level management equipped with core managerial competencies and relevant IT skills.
- 2. To cater to the requirements of Industries.
- 3. To prepare students to take up Higher Education to become business scientists, researchers, consultants and teachers, with core competencies.
- 4. To develop Ethical Managers with Inter-Disciplinary and Holistic approach.
- 5. To understand the concept of investment and its importance in financial planning.
- 6. To learn when and how to start investing wisely.
- 7. To understand the role of data analytics in finance and its significance.
- 8. To learn about investor services, including the KYC process, online transaction facilities, and grievance redressal mechanisms.
- 9. To engage in practical assignments and case studies to analyze mutual fund schemes.
- 10. To develop skills to interpret, visualize, and effectively communicate data insights.
- 11. To apply critical thinking to solve complex problems using advanced statistical techniques.

3. ELIGIBILITY FOR ADMISSION:

Candidates who have completed Two-year Pre-University Course of Karnataka State or 10+2 years of education in Karnataka and other states or its equivalent are eligible for admission into this program. Students who have cleared 2nd PUC Examination directly (through open schooling are also eligible to apply for this programme. Students who have completed Diploma in Commercial Practice are eligible for lateral entry into 3rd Semester B.Com.



4. DURATION OF THE PROGRAMME:

The duration of the programme is three (03) years of Six Semesters. A candidate shall complete his/her degree within six (06) academic years from the date of his/her admission to the first semester. Students successfully completing three (03) years of the course will be awarded Bachelor's Degree in Commerce (FINTECH) – B.COM- FINTECH.

5. MEDIUM OF INSTRUCTION

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

6. CLASSROOM STRENGTH OF STUDENTS

Maximum number of students in each section shall be 60 or as per University Regulations.

7. ATTENDANCE:

- a. For the purpose of calculating attendance, each semester shall be taken as a Unit.
- b. A student shall be considered to have satisfied the requirement of attendance for the

semester, if he / she has attended not less than 75% in aggregate of the number of working periods in each of the courses compulsorily.

A student who fails to complete the course in the manner stated above shall not be permitted to take the University examination.

8. COURSE MATRIX

(i) Annexure-1 for B.COM-FINTECH

9. TEACHING AND EVALUATION:

M.Com (All Programs) /MBA / MFA / MBS graduates with basic degree in B. Com (All B.Com Programs), B.B.M, BBA & BBS from a recognized University, are only eligible to teach and evaluate the courses (excepting languages, compulsory additional subjects and core Information Technology related subjects) mentioned in this regulation. Languages, IT related courses and additional courses shall be taught by the Post-graduates as recognized by the respective Board of Studies.

10. SCHEME OF EXAMINATION:

- a. There shall be a University examination at the end of each semester. The maximum marks for the university examination in each course/paper shall be 80.
- b. Of the 20 marks allotted for Internal Assessment, 10 marks shall be based on average of two tests (20 Marks each). Each test shall be of at least 01 hour duration to be held during the semester. The remaining 10 marks of the Internal Assessment shall be based on Attendance and Assignments /skill development exercises of 05 marks each.
- c. The marks based on attendance shall be awarded as given below: 76% to 80% = 02 marks



81% to 85% = 03 marks 86% to 90% = 04 marks. 91% to 100% = 05 marks.

11. PATTERN OF QUESTION PAPER:

Each question paper shall carry 80 marks and the duration of examination is 3 hours. The Question paper shall ordinarily consist of four sections, to develop testing of conceptual skills, understanding skills, comprehension skills, analytical skills and application of skills. The question paper setter shall prepare TWO sets of question papers with a maximum of 10% repetition. All practical / problems oriented question papers shall be provided only in English. However, the theory subjects' question papers shall be provided in both Kannada and English versions.

The Question Paper will be as per the following Model:

Section A	Conceptual questions (5 questions out of 8)	$5 \ge 2 = 10$
Section B	Analytical questions (4 questions out of 6)	$4 \ge 5 = 20$
Section C	Essay type questions (3 questions out of 5)	3 x 15 = 45
Section D	Skill Based questions	$1 \ge 5 = 05$
Total		80 marks

12. APPEARANCE FOR THE EXAMINATION:

- a) A candidate shall apply for all the courses in each examination when he/she appears for the first time. A candidate shall be considered to have appeared for the examination only if he/she has submitted the prescribed application for the examination along with the required fees to the University.
- b) A candidate who has passed any language under Part-1 shall be eligible to claim exemption from the study of the language if he/she has studied and passed the language at the corresponding level.
- c) Further, candidates shall also be eligible to claim exemption from studying and passing in those Commerce subjects which he/she has studied and passed at the corresponding level, subject to the conditions stipulated by the University.
- d) A candidate who is permitted to seek admission to this Degree Programme on transfer from any other University, shall have to study and pass the subjects which are prescribed by the University. Such candidates shall however, not be eligible for the award of ranks.

13. MINIMUM FOR A PASS:

(a) No candidate shall be declared to have passed the Semester Examination as the case may be under each course /paper unless he/she obtains not less than 35% (i.e. 28 marks out of 80) marks in written examination / practical examination and 40% marks in aggregate of written/ practical examination and internal assessment put together. However, there is no minimum marks to pass internal assessment tests including other Internal Assessments such as Viva-Voce, Internship Report, Field Survey Report and similar others.

(b) A candidate shall be declared to have passed the program if he/she secures at least 40% of marks or a CGPA of 4.0 (Course Alpha-Sign Grade P) in aggregate of both internal assessment



and semester end examination marks put together in each course of all semesters, such as theory papers/ practical / field work / internship / project work / dissertation / viva-voce, provided the candidate has secured at least 40% of marks in the semester end examinations in each course.

(c) The candidates who pass all the semester examinations in the first attempt are eligible for ranks, provided they secure at least CGPA of 6.00 (Alpha-Sign Grade B).

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

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

(f) If a candidate fails in a subject/course, either in theory or in practicals, he/she shall appear for that subject only at any subsequent examination, as prescribed for completing the programme. He/she must obtain the minimum marks for a pass in that subject (theory and practicals, separately) as stated above.

(g) The minimum total credits that a candidate shall obtain in aggregate in all semesters must be 142 credits out of the total credits allotted for the program, to be declared as pass in the program.

14. CLASSIFICATION OF SUCCESSFUL CANDIDATES:

- a. The results of the First to Sixth semester degree examination shall be declared and classified separately as follows:
 - i. First Class: Those who obtain 60% and above of the total marks.
 - ii. Second Class: Those who obtain 50% and above but less than 60% of total marks.
 - iii. **Pass Class:** Rest of the successful candidates who secure 40% and above but less than 50% of marks.
- b. Class shall be declared based on the aggregate marks obtained by the candidates in all the courses of all semesters of this Degree Program (excluding Part 3 Courses mentioned in the Course Matrix).
- c. The candidates who have passed each course in the semester end examination in the first attempt only shall be eligible for award of ranks. The first ten ranks only shall be notified by the University.

15. PROVISION FOR IMPROVEMENT OF RESULTS:

The candidate shall be permitted to improve the results of the whole examination or of any Semester or a specific course within the prescribed time by the university after the publication of the results. This provision shall be exercised only once during the course and the provision once exercised shall not be revoked. The application for improvement of results shall be submitted to the Registrar (Evaluation) along with the prescribed fee.

16. FINAL RESULT / GRADES DESCRIPTION

An alpha-sign grade, the eight-point grading system, as described below shall be adopted for classification of successful candidate. The declaration of result is based on the Semester Grade



Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned towards the completion of all the six semesters of the programme and the corresponding overall alpha-sign grades.

Semester	Alpha – Sign/	Semester/Program	Result/Class
GPA/Program	Letter Grade	% of Marks	Description
CGPA			
9.00-10.00	O (Outstanding)	90.00-100	Outstanding
8.00-<9.00	A+ (Excellent)	80.0-<90.00	First Class Exemplary
7.00-<8.00	A (Very Good)	70.0-<80.00	First Class Distinction
6.00-<7.00	B + (Good)	60.0-<70.00	First Class
5.50-<6.00	B (Above Average)	55.0-<60.00	High Second Class
5.00-<5.50	C (Average)	50.0-<55.00	Second Class
4.00-<5.00	P (Pass)	40.0-<50.00	Pass Class
Below 4.00	F (Fail)	Below 40	Fail/Re-appear
Ab (Absent)	-	Absent	-

Final Result / Grades Description

The Semester Grade Point Average (SGPA) in a Semester and the CGPA at the end of each year may be calculated as described in para 15:

17. COMPUTATION OF SEMESTER GRADE POINT AVERAGE AND CUMULATIVE GRADE POINT AVERAGE

I. Calculation of Semester Grade Point Average (SGPA)

The Grade Points (GP) in a course shall be assigned on the basis of marks scored in that course as per the Table I. Any fraction of mark in the borderline less than 0.50 be ignored in assigning GP and the fractions of 0.50 or more be rounded off to the next integers. The Credit Points (CP) shall then be calculated as the product of the grade points earned and the credits for the course. The total CP for a semester is the sum of CP of all the courses of the semester. The SGPA for a semester is computed by dividing the total CP of all the courses by the total credits of the semester. It is illustrated below with typical examples.

2. Calculation of Cumulative Grade Point Average (CGPA)

The aggregate or cumulative SGPA (CGPA) at the end of the second, fourth and sixth semesters shall be calculated as the weighted average of the semester grade point averages. The CGPA is calculated taking into account all the courses undergone over all the semesters of a programme, i.e. The CGPA is obtained by dividing the total of semester credit weightages by the maximum credits for the programme.

$CGPA = \sum (Ci x Gi) / \sum Ci$

Where Gi is the grade point of the 'i'th course / paper and Ci is the total number of credits for that course/ paper

 $CGPA = \sum (Ci x Si) / \sum Ci$



Where Si is the SGPA of the 'i'th semester and Ci is the total number of credits in that semester.

% Marks in a paper/practical	Grade Point (GP)	% Marks in a paper/practical	Grade Point (GP)
98-100	10	63-67	6.5
93-97	9.5	58-62	6.0
88-92	9.0	53-57	5.5
83-87	8.5	48-52	5.0
78-82	8.0	43-47	4.5
73-77	7.5	40-42	4.0
68-72	7.0	Below 40	0

Table 1: Conversion of Percentage of Marks into Grade Points in a Course/Paper

18. TERMS AND CONDITIONS:

- a. A candidate is allowed to carry all the previous un-cleared papers to the subsequent semester/semesters.
- b. Such of those candidates who have failed/remained absent for one or more papers henceforth called as repeaters, shall appear for exam in such paper/s during the three immediately succeeding examinations. There shall be no repetition for internal assessment test.
- **c.** The candidate shall take the examination as per the syllabus and the scheme of examination in force during the subsequent appearance.

19. MEDALS AND PRIZES:

No candidates passing an external examination shall be eligible for any scholarship, fellowship, medal, prize or any other award

20. REMOVAL OF DIFFICULTY AT THE COMMENCEMENT OF THESE REGULATIONS:

If any difficulty arises while giving effect to the provision of these Regulations, the Vice Chancellor may in extraordinary circumstances, pass such orders as he may deem fit



ANNEXURE-1 COURSE MATRIX

I Semester

	Courses	Paper Code	Instructi on	Duration of Exam		Marks		Credits
		0000	hrs/week	(Hrs.)	IA	Univ. Exam	Total	
Part 1-	Language-1 - Kannada/Sanskrit/Urdu/Tami l/Telugu/Malayalam/Addition al English / Marathi/ Hindi		4	3	20	80	100	3
Language	Language – II English		4	3	20	80	100	3
Part 2-	Financial Accounting	1.1	4	3	20	80	100	4
DSC	Introduction to Financial Markets	1.2	4	3	20	80	100	4
	Business Environment	1.3	4	3	20	80	100	4
	Introduction to Data Analytics for Finance	1.4	4	3	20	80	100	4
Part 3- CC	Constitutional Values-1		3	1.5	10	40	50	2
	Total				130	520	650	24

Note: The student shall take up **any one Value- Added Certificate Course of 30 hours,** at Institutional level or any MOOC program under **SWAYAM** portal or through any other recognised training institute. It is compulsory for all students to carry out this course from the beginning of the first semester and before the end of second semester. This will carry **ONE credit,** which will be reflected in the **second semester marks card**. The marks shall be uploaded by the institution, along with IA marks, after obtaining the course completion certificate.



COURSE MATRIX

II Semester

	Courses	Paper Code	Instructi on	Duration of Exam		Marks		Credits
		0000	hrs/week	(Hrs.)	IA	Univ. Exam	Total	
Part 1-	Language-1 - Kannada/Sanskrit/Urdu/Tami I/Telugu/Malayalam/Addition al English / Marathi/ Hindi		4	3	20	80	100	3
Language	Language – II English		4	3	20	80	100	3
Part 2-	Advanced Financial Accounting	2.1	4	3	20	80	100	4
DSC	Mutual Funds - VA series - NISM	2.2	4	3	20	80	100	4
	Business Regulations	2.3	4	3	20	80	100	4
	Statistical Methods using Advanced data Analytics	2.4	4	3	20	80	100	4
Part 3- CC	Constitutional Values-2		3	1.5	10	40	50	2
	Value-Added Certificate Course *		-	-	25	-	25	1*
	Total				155	520	675	25



Syllabus - Semester I

Name of the Program: Bachelor of Commerce (FINTECH) **Course Code. 1.1** NAME OF THE COURSE: FINANCIAL ACCOUNTING **COURSE CREDITS NO.OF HOURS** TOTAL NO. OF PER WEEK **TEACHING HOURS 4 CREDITS** 4 HOURS 56 HOURS Pedagogy: Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Field Work etc. **Course Outcomes:** On successful completion of the course, the students will be able to Understand the theoretical frame work of accounting as well as Accounting a. standards. b. Prepare Financial Statements from Incomplete records. c. Work out the accounting treatments for Consignment transactions. d. Learn various methods of Accounting for Hire Purchase transactions. e. Work out various Accounting treatments for Dependent Branches. **SYLLABUS:** Hours **Unit - 1: Theoretical Framework of Accounting** 08 Introduction-Meaning, Scope, Objectives, Importance and Functions of Accounting; Terminologies used in Accounting: Users of Accounting Information; Accounting Process; Cash basis and Accrual basis of Accounting; Branches of Accounting, Principles of Accounting, Concepts and Conventions; Accounting Standards-Indian Accounting Standards (Ind AS)-Meaning and Definition, Need and Objectives; Accounting Equations, Problems on Accounting Equations. 12 Unit - 2: Conversion of Single Entry System to Double Entry System Accounts from Incomplete Records/Single Entry System -Meaning, Features, Merits & Demerits; Conversion into Double Entry System, Need for Conversion; Preparation of Statement of Affairs, Cashbook, Memorandum Trading Account, Total Debtors Account, Total Creditors Account, Bills Receivable Account, Bills Payable Account & Trading and Profit & Loss and Balance Sheet-Problems 12 **Unit - 3: Consignment Accounts** Introduction-Meaning of Consignor, Consignee, Account Sales & Proforma Invoice; Goods Invoiced at Cost Price, Goods Invoiced at Selling Price, Accounting for Normal & Abnormal Loss; Valuation of Stock; Passing of Journal Entries & Preparation of Ledger Accounts in the books of Consignor only- Problems 12 **Unit - 4: Hire Purchase System** Meaning of Hire Purchase and Installment Purchase System, Difference between Hire Purchase and Installment Purchase, Important Definitions-Hire Purchase Agreement, Hire Purchase Price, Cash Price, Hire Purchase Charges; Calculation of Interest, Calculation of Cash Price; Journal Entries and Ledger Accounts in the books of Hire Purchaser only. (Asset Accrual Method only)- **Problems**



Uni	it - 5: Branch Accounts	12
and Me the Bra	eaning, Objectives and Advantages of Branch Accounting; Types of Branches- Mal Features of Dependent Branches, Independent Branches and Foreign Brachods of maintaining Books of Accounts by the Head Office–Debtors System onl goods are sent at Cost Price and Invoice Price & ascertainment of Profit or I anch under Debtors System – Problems	anches y wher
	Il Development Activities:	
1.	Enlisting any Five Indian Accounting Standards	
2.	Prepare a Memorandum Trading Account, Total Debtors Account, Total Credite	ors &
	Statement of Affairs with imaginary figures.	
3.	Preparation of Pro-form Invoice and Accounts sales with imaginary figures.	
4.	Prepare the Hire Purchase table with imaginary figures.	
5.	Prepare Branch Account with imaginary figures.	
Boo	oks for Reference:	
1.	Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, McGraw-Hill Education, 13 th Edition.	
2.	S. Anil Kumar, V. Rajesh Kumar and B. Mariyappa – Financial Accounting, Himalaya Publishing House, New Delhi.	
3.	SP.Iyengar (2005), Advanced Accounting, Sultan Chand & Sons, Vol.1.	
4.	Charles T. Horn gren and Donna Phil brick, (2013) Introduction to Financial Accounting, Pearson Education,11 th Edition.	
5.	J.R.Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi, 2 nd Edition.	
6.	S.N.Maheshwari, and S.K.Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6 th Edition.	



	e Program: Bachelor of Con Course Code: 1.2 IE COURSE: INTRODUCT MARKETS		
COURSE CREDITS	NO. OF HOURSPER WEEK	TOTAL NO. OF TEACHING HOURS	
4 CREDITS	4 HOURS	56 HOURS	
Pedagogy: Classroom Leo Work etc.	cture, Tutorials, Group discuss	ion, Seminar, Case Stud	ies, Field
 investing. b. Identify various investing. c. Understand the function mutual funds, indices, d. d. Understand the function 	and importance of investment ment options available. This of stock exchanges and the depositories, and dematerializations of the securities market and the in the securities market and the	basics of equity, debt, de ation. I the role of regulators lik	erivatives, ce SEBI.
SYLLABUS:			HOUR
Unit-1: Introduction to In	nvestment		08
•	y should one invest?, When to?, What is meant by Interest	6	
Unit-2: Introduction to l	Investment		10
investment, Long-term fir	e for investment, Short-tern nancial options available for I Debt Instrument, Derivative,	nvestment, Stock Exchar	nge and its
Unit-3: Securities Marke	et		10
	nction of Securities Market. ecurities Market, Primary Ma l Discount.	-	
Unit-4: Secondary Mark	et & Trading		14
Screen Based Trading, N	s role, Stock Exchange and NEAT, placing orders, Contr ity and Debt Investments, D	act Note, Brokerage, P	roducts in
	Depositories and Miscellaneo	Dus	14
Risks, Rights of Mutual	ual Funds, Types of Mutual H Fund holders, Depositorie Split, Buyback, Clearing & S	s, Depository Participa	nts, ISIN,



Skill Development Activities:

- 1. Draw the structure of Indian Financial Markets
- 2. Prepare the list of various financial instruments in Capital Market and Money Market
- 3. List out the various types of Mutual Funds
- 4. List out the various options available for Investments

Books for References:

- 1. "Financial Markets: Beginner's Module" by NSE Academy
- 2. "The Intelligent Investor" by Benjamin Graham
- 3. "A Random Walk Down Wall Street" by Burton G. Malkiel
- 4. "Common Stocks and Uncommon Profits" by Philip Fisher



Name of the F	rogram: Bachelor of Course Code:1	Commerce (FINTECH) .3	
Name of t	he Course: BUSINESS		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TI HOURS	EACHING
4 CREDITS	4 HOURS	56 HOURS	
Pedagogy: Classroom Lectu Field Work etc.			dies,
b) Analyse the various erc) Design a competitive a	ments of Business Envir avironmental factors inf analysis for a specific Ir	conment. luencing business organisat	
SYLLABUS:			HOURS
Unit- 1: Introduction to B	usiness Environment		12
Unit- 2: Political and Lega			10
Political Environment- Fu in business- Reasons for and			tervention
Legal environment-Impact	of various laws on Ind	an businesses.	
Unit-3: Economic and Glo	bal Environment		14
Economic Environment- Environment, Factors affect	0	±	Economic
Global environment -Mea and demerits of Globalisat market entry strategies; MN	ion, Impact of Globalis	sation on Indian businesse	
Unit- 4: Technological Env	rironment		10
Technological Environme Impact of Technological c Transfer- Meaning, Benefits	hanges on business, T	0	
Unit- 5: Demographic and I	Natural Environment		10
Demographic Environment Natural Environment : Mea environment on business.	t- Meaning and compor		

environment on business.



Skill Development Activities:

- a. List out the benefits of Technology on businesses.
- b. Draft Five Forces Model for an Imaginary business.
- c. List out the impact of Globalisation on Indian businesses
- d. List out any five Demographic factors affecting businesses.

Books for References:

- 1. Aswathappa. K, Essentials Of Business Environment, HPH
- 2. Sundaram & Black: The International Business Environment; Prentice Hall
- 3. Francis Cherunilam, Business Environment- Text and Cases, 8th Edition, HPH
- 4. Chidambaram: Business Environment; Vikas Publishing
- 5. Upadhyay, S: Business Environment, Asia Books
- 6. Chopra, B K: Business Environment in India, Everest Publishing
- 7. M. Ashikary, Economic Environment of Business.
- 8. Veena Keshav Pailwar, Business Environment, PHI Learning Pvt. Ltd
- 9. Vivek Mittal, Business Environment, 1st Edition, Excel Books



	: Bachelor of Commerce	(FINTECH)
(NAME OF THE COURSE: INT	Course Code:1.4 FRODUCTION TO DAT FINANCE	A ANALYTICS FOR
COURSE CREDITS: :	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom Lecture, Tut Studies, Field Work etc.	orials, Group discussion, So	eminar, Case
ourse Outcomes: On successful co	±	
a. Understand the role and impo	•	
b. Apply appropriate data collect	=	
c. Utilize EDA tools and techni	-	0
d. Understand the principles ofe. Apply regression analysis and		
e. Apply regression analysis and	u forecasting techniques to	imancial uata.
SYLLABUS		HOURS
Unit 1: Fundamentals of Data Analyt	tics	10
Introduction to data analytics in finance.	. Basics of data visualization a	and interpretation. Statistical
•		
concepts and analysis techniques, Introd		
concepts and analysis techniques, Introd Unit – 2: Data Collection and Prepa	duction to data mining and m	
Unit – 2: Data Collection and Prepa	duction to data mining and m	achine learning in finance
	duction to data mining and m aration ata collection methods and te	achine learning in finance
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data	duction to data mining and m ration ata collection methods and tensformation	achine learning in finance
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and trar	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial tren	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and tran Unit – 3: Exploratory Data Analysis Exploring and summarizing financial data statistics and key performance indicator	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial tren rs (KPIs), EDA tools and tech	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and tran Unit – 3: Exploratory Data Analysis Exploring and summarizing financial da statistics and key performance indicator Unit – 4: Predictive Analytics in Fa- Introduction to predictive modeling	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial trens rs (KPIs), EDA tools and tech inance g, Regression analysis and	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive iniques in finance 12 If forecasting techniques,
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Da preprocessing, Data integration and trar Unit – 3: Exploratory Data Analysis Exploring and summarizing financial da	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial tren rs (KPIs), EDA tools and tech inance g, Regression analysis and ta, Credit risk assessment a	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive iniques in finance 12 If forecasting techniques,
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and trar Unit – 3: Exploratory Data Analysis Exploring and summarizing financial da statistics and key performance indicator Unit – 4: Predictive Analytics in F Introduction to predictive modeling Time series analysis for financial da Unit – 5 : Advanced Topics in Data Machine learning algorithms for fina analysis and social media data in fin	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial trents (KPIs), EDA tools and tech inance g, Regression analysis and ta, Credit risk assessment a a Analytics for Finance ance (e.g., decision trees, r ance, Fraud detection and p	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive iniques in finance 12 I forecasting techniques, and prediction models 12 12 13 14 15 16 17 18 19 110 112 12 12 12 12 12 12 12 13 14 15 16 17 18 19 112 12 12 12 12 12 12 12 12 13 14 15 16 17 18 19 19 10 <tr< td=""></tr<>
 Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and trar Unit – 3: Exploratory Data Analysis Exploring and summarizing financial da statistics and key performance indicator Unit – 4: Predictive Analytics in F Introduction to predictive modeling Time series analysis for financial da Unit – 5: Advanced Topics in Data Machine learning algorithms for fina analysis and social media data in fin- big data analytics and cloud comput Skill Development Calculate and interpret descripting finance. 	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial trentrs (KPIs), EDA tools and tech inance g, Regression analysis and ta, Credit risk assessment a a Analytics for Finance ance (e.g., decision trees, r ance, Fraud detection and p ing in finance. ive statistics and key performation	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive miques in finance 12 I forecasting techniques, and prediction models 12 andom forests), Sentiment prevention using analytics mance indicators (KPIs) in
Unit – 2: Data Collection and Prepa Data sources in finance and banking, Data preprocessing, Data integration and trar Unit – 3: Exploratory Data Analysis Exploring and summarizing financial da statistics and key performance indicator Unit – 4: Predictive Analytics in F Introduction to predictive modeling Time series analysis for financial da Unit – 5 : Advanced Topics in Data Machine learning algorithms for fina analysis and social media data in fin big data analytics and cloud comput Skill Development 1. Calculate and interpret descripti	duction to data mining and m ration ata collection methods and tensformation (EDA) ata, Visualizing financial trens rs (KPIs), EDA tools and tech inance g, Regression analysis and ta, Credit risk assessment a a Analytics for Finance ance (e.g., decision trees, r ance, Fraud detection and p ing in finance. ive statistics and key perform to analyze temporal patterns	achine learning in finance 10 chniques, Data cleaning and 12 ids and patterns, Descriptive iniques in finance 12 I forecasting techniques, and prediction models 12 andom forests), Sentimentorevention using analytics mance indicators (KPIs) in s in any financial data.



Books for reference:

- 1. "Data Science for Business: What You Need to Know About Data Mining and Data Analytic Thinking" by Foster Provost and Tom Fawcett
- 2. "Python for Data Analysis" by Wes McKinney



Name of the Progra	im: Bachelor of Comm Course Code: 2.1 E: ADVANCED FINA)		ING
COURSE CREDITS	NO. OF HOURS	TOTAL NO. O	
	PER WEEK	TEACHING HOU	RS
4 CREDITS 4 HOURS 56 HOURS			
Pedagogy: Classroom Lecture, T Field Work etc.			
 ourse Outcomes: On successful a. Understand & Compute the b. Understand and preparing the Companies. c. Deal with the Inter-Department d. Articulate the Accounting the Companies the Accounting th	amount of Claims for I ne accounts for convertin mental Transfers and the reatment for Royalty Ag	Loss of Stock. ng Partnership Firms t ir Accounting Treatn greements & Transact	o Limited nent.
e. Outline the Emerging Trend	ls in the field of Accour	nting	
SYLLABUS:			HOUR
Unit - 1: Insurance Claims for I	Loss of Stock		12
Ascertainment of Fire Insuran Problems Unit - 2: Sale to a Company or Company Introduction-Meaning of Sale Consideration – Methods of Cale Partnership Firm (Ledger Acc	Conversion of Partner or Conversion of Partner culating Purchase Consi ounts only): Passing (rship to a Limited nership-Meaning of deration, Closing the Dpening Journal Ent	12 Purchase books of tries and
preparing Opening Balance Shee Unit - 3: Departmental Account		books of Company - P	12
Meaning and Features of Departr Expenses and Common Expense Expenses; Preparation of Statem Profit/Loss and Balance Sheet(Cost Price - Simple Problems	ses; Need and Bases of thent of Profit in Column	Apportionment of ar form, Statement of	Common f General nsfers at
Unit - 4: Royalty Accounts			12
Introduction-Meaning, Terms us Rent, Short Workings, Recoup Periods; Accounting Treatmen Ledger Accounts including M Lessor's books)- Problems	oment of Short Workin t in the book of Less	ngs with Strike and ee only–Journal En	Lockout tries and
Unit - 5: Emerging Trends in A	Accounting		08
Digital transformation of Acc Computing in Accounting; Gree Accounting; Database Accounti	ounting; Big Data An en Accounting; Human	Resource Accounting	



Skill Development Activities:

- 1. List out the Procedure & Documentation involved in the Insurance claims.
- 2. Calculate the Purchase Consideration with imaginary figures (Any type).
- 3. Identify the common expenses of a Departmental Undertaking and list them
- 4. Prepare Royalty Table with imaginary figures.

Reference Books:

- 1. S.N. Maheshwari and S.K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6th Edition.
- 2. S.AnilKumar,V.RajeshKumarandB.Mariyappa–FinancialAccounting,Himalaya Publishing House, New Delhi
- 3. SP Iyengar (2005), Advanced Accounting, Sultan Chand & Sons, Vol.1.
- 4. Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, McGraw-Hill Education, 13thEdition.
- 5. Charles T. Horngren and Donna Phil brick,(2013) Introduction to Financial Accounting, PearsonEducation,11thEdition.
- 6. J.R. Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi,32nd Edition.





Name of the Program: Bachelor of Commerce (FINTECH) Course Code: 2.2 Name of the Course: MUTUAL FUNDS - VA SERIES - NISM

CO				
	URSE CREDITS	NO. OF HOURS PER WEEK	TOTAL TEACHIN	NO. OF G HOURS
4 C	REDITS	4 HOURS	56 HC	OURS
	agogy: Classroom Lecture, Tutorials, Group	p discussion, Seminar, (Case Studies, I	Field
Cou a)	irse Outcomes: On successful completion Identify and describe various mutual fund	,		
b)	Assess different investment strategies, in benefits of systematic plans like SIPs, ST	• •	ve managemen	nt and the
c)	Understand the fund management proces (AMCs).		Management (Companie
d)	Evaluate mutual fund performance using	key performance indica	tors, such as l	NAV,
,	alpha, beta, and Sharpe ratio.			
e)	Compare fund performance against bench	hmarks to determine eff	ectiveness.	
SYI	LLABUS:			HOURS
Uni	t-1: Introduction to Mutual Funds			10
•	ersification, professional management, liqu	er types, Benefits of Inv uidity, Regulatory Envir		
	egulating mutual funds, Key regulations an	uidity, Regulatory Envi d compliance requireme	ronment, Role	ual Funds,
		uidity, Regulatory Envi d compliance requireme	ronment, Role	ual Funds,
Uni Mut sche Stra Plar	egulating mutual funds, Key regulations an	uidity, Regulatory Envir d compliance requirement ent Strategies ot schemes, hybrid sche objectives of different owth vs. value investing, SIP vs. lump sum investr	emes, solution schemes, In Systematic In nents, Other S	14 14 14 n-oriented nvestment nvestment
Uni Mut sche Stra Plar Plar	egulating mutual funds, Key regulations an it-2: Mutual Fund Projects and Investme tual Fund Schemes, Equity schemes, deb emes, Understanding the features and itegies, Active vs. passive management, Gro ns (SIPs), Benefits and mechanics of SIPs, S	uidity, Regulatory Envir d compliance requirement ent Strategies ot schemes, hybrid sche objectives of different owth vs. value investing, SIP vs. lump sum investr ystematic Withdrawal P	emes, solution schemes, In Systematic In nents, Other S	14 14 14 n-oriented nvestment nvestment
Uni Mut sche Stra Plar Uni Uni (AM indi Ben	egulating mutual funds, Key regulations an it-2: Mutual Fund Projects and Investme tual Fund Schemes, Equity schemes, deb emes, Understanding the features and itegies, Active vs. passive management, Gro ns (SIPs), Benefits and mechanics of SIPs, S ns, Systematic Transfer Plans (STPs) and S	uidity, Regulatory Envir d compliance requirement ent Strategies of schemes, hybrid sche objectives of different owth vs. value investing, SIP vs. lump sum investr ystematic Withdrawal P mance Evaluation rocess, Role of Asset Ma ie), Performance Evaluated returns, alpha, beta,	emes, solution schemes, In Systematic In nents, Other S lans (SWPs).	14 n-oriented nvestment systematic 12 ompanies formance
Uni Mut sche Stra Plar Plar Uni (AM indi Ben agai	egulating mutual funds, Key regulations an it-2: Mutual Fund Projects and Investme tual Fund Schemes, Equity schemes, deb emes, Understanding the features and tegies, Active vs. passive management, Gro ns (SIPs), Benefits and mechanics of SIPs, S ns, Systematic Transfer Plans (STPs) and S it-3: Mutual Fund Operations and Perfor tual Fund Operations, Fund management pr ACs), Understanding NAV (Net Asset Valu cators (KPIs) for mutual funds, Risk-adjust achmarking and Comparison, Importance of	uidity, Regulatory Envir d compliance requirement ent Strategies of schemes, hybrid sche objectives of different owth vs. value investing, SIP vs. lump sum investr ystematic Withdrawal P mance Evaluation rocess, Role of Asset Ma ie), Performance Evaluated returns, alpha, beta, f benchmarks, Comparin	emes, solution schemes, In Systematic In nents, Other S lans (SWPs).	14 n-oriented nvestment systematic 12 ompanies formance
Uni Sche Stra Plar Plar Uni (AM indi Ben agai Uni Dist and prac	egulating mutual funds, Key regulations an it-2: Mutual Fund Projects and Investme tual Fund Schemes, Equity schemes, deb emes, Understanding the features and ategies, Active vs. passive management, Gro ns (SIPs), Benefits and mechanics of SIPs, S ns, Systematic Transfer Plans (STPs) and S it-3: Mutual Fund Operations and Perfor tual Fund Operations, Fund management pr ACs), Understanding NAV (Net Asset Valu cators (KPIs) for mutual funds, Risk-adjust ichmarking and Comparison, Importance of inst benchmarks	uidity, Regulatory Envir d compliance requirement ent Strategies of schemes, hybrid sche objectives of different owth vs. value investing, SIP vs. lump sum investr ystematic Withdrawal P mance Evaluation rocess, Role of Asset Ma ie), Performance Evaluated returns, alpha, beta, f benchmarks, Comparin inds ribution, Role of distrib ng and suitability assess or Communication, In	emes, solution schemes, In Systematic In nents, Other S lans (SWPs). anagement Co tion, Key perf Sharpe ratio, ng fund perfor utors, financia ssment, Ethic	14 14 n-oriented nvestment systematic 12 ompanies formance 14 al advisores and be



Taxation of Mutual Funds, Tax implications for different types of funds, Capital gains tax, dividend distribution tax, Tax-saving mutual funds (ELSS), Investor Services, KYC (Know Your Customer) process, Online services and transactions, Grievance Redressal, Handling investor grievances, Role of AMFI (Association of Mutual Funds in India) in investor protection.

Skill Development Activities:

- 1. Distinguish between different types of mutual funds and their structures.
- 2. Evaluate any mutual fund performance using key performance indicators, such as NAV, alpha, beta, and Sharpe ratio.
- 3. List out the role of Asset Management Companies (AMCs).
- 4. Write a note on KYC required for purchasing Mutual Funds

Books for References:

- 1. Aswathappa, Human Resource Management- Text and Cases (9th Edition), McGraw Hill Education (India) Private Ltd.
- 2. Edwin Flippo, Personnel Management, McGraw Hill
- 3. C. B. Mamoria, Personnel Management, HPH
- 4. K. Venkataramana, Human Resource Management, SHBP
- 5. Subba Rao, Personnel and Human Resources Management, HPH
- 6. Reddy & Appanaiah, Human Resource Management, HPH
- 7. S. Sadri & Others: Geometry of HR, HPH
- 8. Michael Porter, HRM and Human Relations, Juta & Co. Ltd.



Name of the Program: Bachelor of Commerce (FINTECH) Course Code: 2.3 Name of the Course: BUSINESS REGULATIONS				
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS		
4 CREDITS	4 HOURS	56 HOURS		
Pedagogy: Classroom Lecture, Tutorials, Grou Work etc.	p discussion, Seminar, C	Case Studies,	Field	
Course Outcomes: On successful completion a. Comprehend the laws relating to Contr b. Comprehend the rules for Sale of Good c. Understand the significance of Consun d. Understand the need for Environment I	acts and its application i ls and rights and duties oner Protection Act and it	n business ac	ctivities.	
SYLLABUS:			HOURS	
Unit-1: Regulations of Contracts-1			14	
 Offer and acceptance- Offer and Acceptance relationship, Communication of Offer and Accepta acceptance Consideration- Meaning and nature of Consider Contract, Adequacy of consideration, Present and effects Contractual capacity-Meaning of Capacity to O Unsound Mind, Disqualified agreements, Effects of Constant of Constant of Constant of Capacity of Constant of Capacity of Constant of Capacity of C	nce, Revocation and mode ation, Exceptions to the ru past consideration, Unlay Contract, Incapacity to cor	of revocation le- No Consid vful considera	of offer and eration- No tion and its	
Unit-2: Regulations of Contracts-2			14	
 Consent- Meaning of Consent and Free Consent; Meaning and Effects of Coercion, Undue Influence, Fraud, Misrepresentation, Mistake in an agreement. Performance of Contract- Rules regarding Performance of Contracts, Joint Promisors, Impossibility of Performance, Quasi contracts & its performance Discharge of a Contract- Meaning of Discharge and modes of Discharging a Contract –Novation, Remission, Accord, Satisfaction and Breach-Anticipatory Breach and Actual breach Remedies for Breach of Contract- Remedies under Indian Contract Act 1872-Damages, Types of Damages. 				
Unit-3: Contracts of Sale of Goods			12	
Concept of Goods, Sale of Goods v. Agreement to Sell, Contract of Sale of Goods, Performance of a Contract of Sale of Goods, Meaning and Types of Conditions and Warranties, Meaning and Rights of ar Unpaid Seller				
Unit-4: Regulations of Consumer Protection	1		08	
Definitions of the terms – Consumer, Consumer Unfair Trade Practices, Rights of Consumer under – District Forum, State Commission and National	Protection, Consumer D the Act, Consumer Redres			

23



Unit	-5: Regulations of Environmental Protection	08
Pollu	duction - Objectives of the Act, Definitions of Important Terms – Environment, Environm tant, Environment Pollution, Hazardous Substance and Occupier, Types of Pollution, Pow ral Government to protect Environment in India.	
Ski	ll Development Activities:	
	Discuss the contents of the case of "Carlill vs Carbolic Smoke Ball Company" case	
2.	Discuss the contents of the case of "Mohori Bibee v/s Dharmodas Ghose".	
3.	List out any five rights of a consumer.	
4.	List at least 5 items which can be categorized as 'hazardous substance' according to Environment Protection Act.	
Bo 1.	oks for References: M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi.	
Bo 1. 2.		
1.	M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi.	
1. 2.	M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. N.D. Kapoor, Business Laws, Sultan Chand Publications	
1. 2. 3.	M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. N.D. Kapoor, Business Laws, Sultan Chand Publications Avtar Singh, Business Law, Eastern Book Company, Lucknow.	
1. 2. 3. 4.	 M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. N.D. Kapoor, Business Laws, Sultan Chand Publications Avtar Singh, Business Law, Eastern Book Company, Lucknow. SN Maheshwari and SK Maheshwari, Business Law, National Publishing House, New D 	
1. 2. 3. 4. 5. 6.	 M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. N.D. Kapoor, Business Laws, Sultan Chand Publications Avtar Singh, Business Law, Eastern Book Company, Lucknow. SN Maheshwari and SK Maheshwari, Business Law, National Publishing House, New D Aggarwal S K, Business Law, Galgotia Publishers Company, New Delhi Bhushan Kumar Goyal and Jain Kinneri, Business Laws, International Book House 	
1. 2. 3. 4. 5. 6.	 M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. N.D. Kapoor, Business Laws, Sultan Chand Publications Avtar Singh, Business Law, Eastern Book Company, Lucknow. SN Maheshwari and SK Maheshwari, Business Law, National Publishing House, New D Aggarwal S K, Business Law, Galgotia Publishers Company, New Delhi Bhushan Kumar Goyal and Jain Kinneri, Business Laws, International Book House 	



Name of the Program: Bachelor of Commerce (FINTECH) Course Code: 2.4 NAME OF THE COURSE: STATISTICAL METHODS USING ADVANCED DATA ANALYTICS			
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEA HOURS	CHING
4 CREDITS	4 HOURS	56 HOURS	
Pedagogy: Classroom Leo Field Work etc.	cture, Tutorials, Group	discussion, Seminar, Case S	tudies,
 a. Conduct exploratory of b. Use advanced statistic analytics. c. Proficiently use statistical d. Create and interpret and actionable insights. e. Apply statistical technologies. 	data analysis and imple cal methods and machi tical software and prog dvanced data visualiza niques to real-world da	course, the students will be ab ement key statistical methods ne learning algorithms for pr gramming languages for data tions and translate results in ta sets and critically evaluate	ologies. redictive analysis. to e the
f. Understand and apply SYLLABUS:	v ethical considerations	and best practices in data ar	HOURS
Unit-1: FOUNDATIONS OF	F STATISTICAL METH	DDS	12
		tive Statistics: Central Tend , Inferential Statistics: Estim	•
Unit-2: REGRESSION, AND	OVA and CORRELATIO	N	12
Residuals Analysis, Inter squared, AIC, BIC), Logi Diagnostics), Correlation	pretation of Coefficient stic Regression (Binary Analysis (Pearson and	Squares Estimation, Model ents, Model Selection (Adju y Outcomes and Odds Ratios Spearman Correlation, Sign t-hoc Tests (Tukey's HSD)	isted R- s, Model
Unit-3: ADVANCED STATI	STICAL METHODS AN	D MACHNE LEARNING	12
Principal Component Ar Eigenvectors, Visualizir (Hierarchical and K-m Supervised Learning: Cla	nalysis (PCA) (Dimensing Components), Clu eans Clustering, Dist assification and Regres	arity, ARIMA Models, Fore sionality Reduction, Eigenva ster Analysis and Factor cance Metrics, Cluster Va ssion (Classification (Decision and Networks), Model E stering and Association	alues and Analysis lidation), on Trees,
Unit-4: STATISICAL SOFT	WARE AND DATA VIS	UALIZATION	10
Introduction to R and Pyth Data Manipulation with pa	on for Data Analysis (Ba andas (Python) and dply	sics of R and Python for Data A (R), Data Manipulation and C chniques Creating Visualization	Analysis, Cleaning



vanced Data Visualization Techniques with Tools like Tableau, PowerBI	
it-5: CAPSTONE PROJECTS AND ETHICS	10
blems, Presentation and Reporting of Findings, Ethical Issues in Data An	
 Conduct exploratory data analysis on any research topic and implements statistical methodologies. Use advanced statistical methods for predictive analytics. Create and interpret advanced data visualizations on any topic Apply statistical techniques to any real-world data sets and critically explored and critical expl	·
the results.	
ooks for Reference:	
"Applied Multivariate Statistical Analysis" by Richard A. Johnson and Wichern	Dean W.
"The Elements of Statistical Learning" by Trevor Hastie, Robert Tibsh Jerome Friedman	irani, and
"Introduction to the Practice of Statistics" by David S. Moore, George McCabe, and Bruce A. Craig	P.
	Use advanced statistical methods for predictive analytics. Create and interpret advanced data visualizations on any topic Apply statistical techniques to any real-world data sets and critically e the results. ooks for Reference: "Applied Multivariate Statistical Analysis" by Richard A. Johnson and Wichern "The Elements of Statistical Learning" by Trevor Hastie, Robert Tibsh Jerome Friedman "Introduction to the Practice of Statistics" by David S. Moore, George