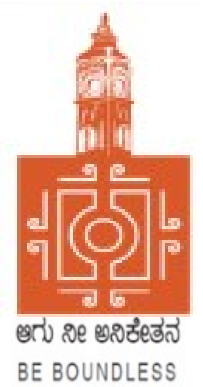

BENGALURU CITY UNIVERSITY

CHOICE BASED CREDIT SYSTEM

(As per SEP)

Syllabus for BBA (Business Analytics)

2025-26 onwards

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 2025-26 held on 20th and 21st June 2025 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 3rd, 4th, 5th & 6th Semesters and syllabus for 3rd, 4th, 5th & 6th semesters of the above mentioned courses. The board authorized the Chairman to make the necessary changes.

MEMBERS PRESENT:

1.	Prof. Jalaja K. R	Professor & Chairman, P. G. Dept. of Commerce, Bengaluru City University, Bengaluru – 560001 Email: Jalaja_kr@rediffmail.com Ph. No: 9449201323	Chairperson
2.	Prof. Ritika Sinha	Professor, BCU School of Management Studies, Bengaluru City University, Bengaluru – 560001 Email: Ritika.snh@gmail.com Ph. No: 9916362171	Member
3.	Dr. Padmaja P. V	Principal, MLA Academy of Higher Learning, 14th Cross Rd. Malleshwaram, Bengaluru – 560003 Email: padmajavenkat123@gmail.com Ph. No: 9845434477	Member
4.	Dr. Bhavani. H	Associate Professor, Department of Commerce, Vivekananda Degree College, Bengaluru – 560055 Email: bhavanih2021@gmail.com Ph. No: 9986867844	Member
5.	Dr. Swaminathan C	Associate Professor, Department of Commerce, GFGC Malleshwaram, Bengaluru – 560032 Email: csngfgcmb@gmail.com Ph. No: 9844472848	Member
6.	Dr. Srihari	Vice Principal, (MEWA) Vanguard Business School, Bengaluru – 560068 Email: snehari13@yahoo.com	Member
7.	Dr. C Nagaraja	Associate Professor, GFGC, Yelahanka, Bengaluru – 560064 Email: Nagaraj.c2009@gmail.com Ph. No: 9844459461	Member
8	Prof. Padmanabha	Associate Professor, M S Ramaiah College of Arts, Science & Commerce, Bengaluru - 560054 Ph. No: 9845399921	Member
9	Dr. Manjunath	Associate Professor, Dept of Management Studies, Kuvempu University, Shakara Ghatta, Shivamogga – 577451 Email: manjurajappa@gmail.com Ph. No: 9480012101	Member

10	Dr. Mahesh	Assistant Professor, Dept. of Studies & Research in Commerce, KSOU, Mysuru – 570006 Ph. No: 9844667411	Member
11	Mr. Deep	Sr. Advisor, CII Institute of Quality, Bengaluru – 560091 Ph. No: 9845353135	Member
12	Mr. Rajkumar Jayanth	Chartered Accountant, Rajbabu & Associates, Bengaluru – 560054	Member

Co-Opted Members Present

13	Dr. Pawan Kumar D B	Principal, SLN College of Arts & Commerce, Fort, Bengaluru Email: dbpawankumar@gmail.com Ph. No: 9538005335	Member
14	Dr. Savitha K	Principal, BEL First Grade College, Bengaluru – 560013 Email: savita.karmungi@gmail.com Ph. No: 9845544030	Member
15	Mr. H.N Gururaja Rao.	Visiting Faculty, SLN College of Arts & Commerce, Fort, Bengaluru	Member
16	Mr. Sharath M	Assistant Professor, Dept. of Management, Sindhi College, Hebbal, Kempapura, Bengaluru – 560024 Email: sharath.kool2007@gmail.com Ph. No: 9964393003	Member

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

REGULATIONS PERTAINING TO

BBA (BUSINESS ANALYTICS)

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 BBA (Business Analytics) Program, offered by Bengaluru City University to Department of Commerce, BCU, Affiliated Colleges, and Constituent Colleges of Bengaluru City University.

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

The Board of Studies resolved to provide the regulation for BBA (Business Analytics) 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 prepare students to pursue careers in Finance, Marketing, Human Resources and allied functions in the Corporate Sector.
6. To develop students for competitive examinations of UPSC, KPSC, Staff Selection Commission, Recruitment of Banking, Insurance companies etc.
7. To develop New Age Entrepreneurs.
8. To prepare students for professions in the field of Accountancy and Taxation, Chartered Accountancy, Cost and Management Accountancy, Company Secretary, Professions in Capital and Commodity Markets, Professions in life and non-life insurance and Professions in Banks
9. To prepare students to fit into the job roles as Business analyst, Financial Analyst, Marketing, HR Associates, Accounts Executives, Tax Consultants Etc.

BBA (Business Analytics)

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.

4. DURATION OF THE PROGRAMME:

The duration of the programme is **THREE** years of Six Semesters. A candidate shall complete his/her degree within **SIX** Academic years from the date of his/her admission to the first BBA. Students successfully completing **THREE** years of the course will be awarded Bachelor's Degree in Business Administration (REGULAR) – BBA- Regular.

5. MEDIUM OF INSTRUCTION

The medium of instruction shall be in English. A candidate will be permitted to write the examination completely in English.

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 BBA-(BUSINESS ANALYTICS)

9. TEACHING AND EVALUATION:

MBA 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 for 4 or 3 credit papers and 40 marks for 2 credit papers.

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. For 2 credit courses, the IA marks will be 10, of which 5 marks shall be based on one test of 20 Marks, reduced to 5 Marks. The remaining 05 marks of the Internal Assessment shall be based on Attendance.

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:

For 4/3 credit papers, 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. All practical / problems oriented and theory subjects question papers shall be provided only in English.

The Question Paper will be as per the following Model:

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

For 2 credit papers, each question paper shall carry 40 marks and the duration of examination is 2 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. All practical / problems oriented and theory subject question papers shall be provided only in English.

The Question Paper will be as per the following Model:

Section A	Conceptual questions (3 questions out of 6)	3 x 2 = 06
Section B	Analytical questions (2 questions out of 3)	2 x 5 = 10
Section C	Essay type questions (2 questions out of 3)	2 x 10 = 20
Section D	Skill Based questions (Compulsory Question)	1 x 4 = 04
Total Marks		40

12. APPEARANCE FOR THE EXAMINATION:

a) A candidate shall apply for all the courses in each semester 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 Management 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) A candidate shall be declared to have passed the Semester Examination under each course/paper provided he/she obtains minimum of 35% (i.e. 28/14 marks out of 80/40) 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.

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.
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.

BBA (Business Analytics)

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.

Final Result / Grades Description

Semester GPA/Program CGPA	Alpha – Sign/ Letter Grade	Semester/Program % of Marks	Result/Class Description
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	-

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 = ∑ (Ci x Gi) / ∑ 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= ∑ (Ci x Si) / ∑Ci

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

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 succeeding examinations (Odd/Even). There shall be no repetition for internal assessment test.

c. The candidate shall take the examination as per the syllabus applicable 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.

BBA (Business Analytics)

I SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration Of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part 1 Languages	Language -I Kannada/Sanskrit/Urdu /Tamil/ Telugu /Malayalam/Additional English / Marathi/ Hindi		4	3	20	80	100	3
	Language – II: English		4	3	20	80	100	3
Part 2 DSC	Principles of Management	1.1	4	3	20	80	100	4
	Spreadsheet for Data Analytics	1.2	4	3	20	80	100	4
	Statistics for Business,Decisions-I	1.3	4	3	20	80	100	4
	Financial Accounting	1.4	4	3	20	80	100	4
Part 3 CC	Constitutional Values -1		3	1½	10	40	50	2
	TOTAL				**130**	**520**	**650**	**24**

II SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part 1 Languages	Language-I Kannada/Sanskrit/Urdu/Tamil/ Telugu/ Malayalam/Additional English / Marathi/ Hindi		4	3	20	80	100	3
	Language – II: English		4	3	20	80	100	3
Part 2 DSC	Human Resource Management and Practices	2.1	4	3	20	80	100	4
	DBMS and SQL for Data Analytics	2.2	4	3	20	80	100	4
	Statistics for Business Decisions-II	2.3	4	3	20	80	100	4
	Corporate Accounting	2.4	4	3	20	80	100	4
Part 3 CC	Constitutional Values-2		3	1½	10	40	50	2
	TOTAL				**130**	**520**	**650**	**24**

BBA (Business Analytics)

III SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part 1 Language	Language: I Kannada/Sanskrit/Urdu/Tamil/ Telugu/Malayalam/Additional English / Marathi/ Hindi		4	3	20	80	100	3
	Language – II: English		4	3	20	80	100	3
Part 2 DSC	Principles of Marketing	3.1	4	3	20	80	100	4
	Organizational Behaviour	3.2	4	3	20	80	100	4
	C Programming	3.3	4	3	20	80	100	4
	Fundamentals of Cost Accounting	3.4	4	3	20	80	100	4
Part 3 SEC	Data Analysis using Tableau	3.5	3	1½	10	40	50	2
	TOTAL				130	520	650	24

IV SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part 1 Language	Language: I Kannada/Sanskrit/Urdu/Tamil/ Telugu/Malayalam/Additional English / Marathi/ Hindi		4	3	20	80	100	3
	Language – II: English		4	3	20	80	100	3
Part 2 DSC	Business Data Analytics	4.1	4	3	20	80	100	4
	Financial Management	4.2	4	3	20	80	100	4
	Research Methodology	4.3	4	3	20	80	100	4
	Customer Relationship Management	4.4	4	3	20	80	100	4
Part 3 SEC	Introduction to R	4.5	3	1½	10	40	50	2
	TOTAL				130	520	650	24

BBA (Business Analytics)

V SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part I DSC	Income Tax Law & Practice- I	5.1	4	3	20	80	100	4
	Management Accounting	5.2	4	3	20	80	100	4
	Introduction to PYTHON	5.3	4	3	20	80	100	4
	Marketing Analytics	5.4	4	3	20	80	100	4
	Business Laws	5.5	4	3	20	80	100	4
Part II CC	Survey project*	5.6	2		100**		100	4
	TOTAL				200	400	600	24

INTRUCTIONS : During the V Semester, students shall be assigned Survey Projects and it shall be monitored by the Mentors. Faculty from Commerce and Management department only shall be appointed as Mentors. Survey Project shall be undertaken in any area of Commerce and Management on any domain in a small, medium or large organization.

*A Maximum of 50 Students shall be allotted to each Mentor. 2 hours of mentorship/ workload shall be allotted to a teacher. Attendance shall be monitored as per University criteria (minimum 75%). The Field survey report shall be submitted before the end of the semester for assessment and viva-voce examination.

**The marks shall be awarded on the following basis:
60 marks for Survey Project and 20 marks for Viva-Voce examination to be evaluated by a panel of examiners appointed by the BOE, BCU
20 marks for maintenance of Log Book to be awarded by the mentor.

BBA (Business Analytics)

VI SEMESTER

	Subjects	Paper	Instruction hrs./week	Duration of Exam (hrs.)	Marks			Credits
					IA	Uni. Exam	Total	
Part I DSC	Income Tax Law & Practice- II	6.1	4	3	20	80	100	4
	International Business	6.2	4	3	20	80	100	4
	Strategic Management	6.3	4	3	20	80	100	4
	Financial Analytics	6.4	4	3	20	80	100	4
	HR Analytics	6.5	4	3	20	80	100	4
Part II CC	Internship**	6.6	2	-	100**		100	4
	TOTAL				**200**	**400**	**600**	**24**

INTRUCTIONS : During the VI Semester, students shall be assigned **Internship** and it shall be monitored by the Mentors. Faculty from Commerce and Management department only shall be appointed as Mentors. Internship may be undertaken in any Tiny, Small, Medium or Large organization.

***A Maximum of 50 Students** shall be allotted to each Mentor. 2 **hours** of Mentorship/ Workload shall be allotted to a teacher. Attendance shall be monitored as per University criteria (minimum 75%).

Minimum of 90 hours of Internship shall be undertaken by the student after the class hours during the semester. The Report shall consist of the **concerned Industry's Profile, Specific Organizational Profile, Functions and Operations, Nature of work (Internship) undertaken by the student, Experience & Learning Outcomes and suggestions & conclusion.**

The report shall be prepared in about 50-60 pages and include the Internship Certificate along with the log sheet from the Organization and submitted **before the end of the semester for assessment and viva-voce examination.**
The marks shall be uploaded by the college on the University Portal with IA marks.

**The marks shall be awarded on the following basis:

- 60 marks for Internship Report and 20 marks for Viva-Voce examination to be evaluated by a panel of examiners appointed by the BOE, BCU
- 20 marks for maintenance of Log Book to be awarded by the mentor.

BBA (Business Analytics)

Name of The Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (BUSINESS ANALYTICS) 1.1 **Name of the Course: PRINCIPLES OF MANAGEMENT**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF 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.

a. Understand concepts of business management, principles and function of management
b. Explain the process of planning and decision making.
c. Create organization structures based on authority, task and responsibilities. ·
d. Explain the principles of direction, importance of communication, barrier of communication, motivation theories and leadership styles
e. Explain the requirement of good control system and control techniques.

SYLLABUS:	**HOURS**
Unit - 1: NATURE AND FUNCTIONS OF MANAGEMENT	**10**
Management: Meaning and Definition, Features and Importance of Management; Functions; Levels of Management; Management as a Science, Art and Profession; Management andAdministration (meaning and differences).	
Unit - 2: PLANNING	**8**
Planning: Meaning, Features, Importance, Steps in Planning Process, Types of Planning-(Strategic planning, administrative planning, operational Planning, Contingent planning), Barriers to effective planning, Measures to make planning effective.	
Unit - 3: ORGANISING AND ORGANISATION STRUCTURE	**14**
Organizing Process –Concept of organization:- As an entity, as group of people, as a structure,as a process(meanings only); Principles of organizing; **Organizational structure - Formal Organizational structure**:– Meaning, Types - Line Organization, Line and Staff, Functional, Project, Matrix and Virtual. **Informal Organization**:– Meaning, Characteristics, Importance, Limitations, Difference between Formal and Informal Organization; Factors influencing the organization structure-(Environment, strategy, technology, size, people).	

BBA (Business Analytics)

Unit - 4: DIRECTION	**16**
Direction: Meaning Importance and principles of directing. **Motivation**: Concept, Importance, Features of Motivation; Motivational theories- Maslow's need hierarchy theory, Herzberg's Hygiene Theory, McGregor's Theory X and Theory Y. **Leadership**: Meaning, Leadership Styles- Autocratic, Democratic, Participative, Free Reign, Benevolent & Transformational Leadership (meaning and features of each) **Communication:** Meaning, Communication Process, Types, Barriers to Communication and measures to overcome the barriers in communication.	
Unit - 5: COORDINATION AND CONTROLLING	**8**
Coordination- Meaning and need, requisites for effective coordination **Controlling** – Meaning, Importance, Control Process, Essentials of an Effective Control System, Control techniques- PERT& CPM (meaning and uses only).	
Skill Development Activities: 1. Compare the different types of leadership styles 2. Draw an organizational chart showing the line of authority and responsibility 3. Identify five control techniques used for better productivity of any organisation 4. Draw a chart showing the process of communication	
Books for References: 1. L M Prasad, Principles and Practice of Management, Sultan Chand and Sons, New Delhi 2. Harold Koontz and Heinz Weihrich (2017), Essentials of Management: An International and Leadership Perspective, McGraw Hill Education, 10th Edition. 3. Stephen P Robbins and Madhushree Nanda Agrawal (2009), Fundamentals of Management:Essential Concepts and Applications, Pearson Education, 6thEdition. 4. James H. Donnelly, (1990) Fundamentals of Management, Pearson Education, 7thEdition. 5. P C Tripathi & P N Reddy (2005), Principles of Management, TMH Publications, 3rd Edition.	

BBA (Business Analytics)

Name of The Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (BUSINESS ANALYTICS) 1.2
Name of the Course: SPREADSHEET FOR DATA ANALYTICS

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, tutorials & lab work etc.,

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

a. To learn how to start working with MSEXCEL right from basics to Tables.
b. To understand the various table formatting
c. To equip students with various Functions in MS EXCEL
d. To equip students with Data analysis functions
e. Understand the use of macros and VBA.

SYLLABUS:	HOURS
Unit 1: INTRODUCTION TO SPREADSHEET	**10**

Spreadsheets basics, Need for Spreadsheets, Work-Book, Work –Sheet, Parts of a MS-Excel Work-Sheet- Program area, Work area, Contents of Title-Bar, Manu-Bar, Contents of Manu Ribbons, Meaning of Cell- Cell address, Formula-Bar, Row Numbers, Column-Letters, Selecting Cell and Range of Cells, Merging of Cells, Entering and Saving Data in the Cell, Named Cells, Need of Naming Cells, Entering, Storing, Copying Formula, Using different Arithmetic and logical Operators in Formula, Moving Cell with contents, Copying and Pasting of Cell and Cell Content, Freezing Cells, Editing of Cell Contents, using Cell Formatting Options – Editing Cell Size (increasing Column and Row size of a cell), Text Alignment, using Border, Comments option usage in Cell, Editing and Deleting Comments, Fill, Formatting Fonts, Text Warping, Text Rotate, Using Auto-fit to Adjust Rows and Columns Using of Short Cuts and Short-Cut Menu, Clear Contents in a Cell, Adding, Deleting and Copying Work-Sheet with in a Work-Book, Renaming a File or Work-Sheet, Inserting Multiple Work-Sheet at a time, Formatting a Work-Sheer Automatically, Sorting Textual & Numerical DATA, Sort Dates or Times, Sort by Cell Colour, Font Colour, or by icon, Sort by a custom list, Sort Rows, sort by more than column or row and other issues in sorting.

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Unit 2: TABLES AND FORMATTING	**10**
Creating a Table, Changing the look of a table, Navigating in a Table, Selecting parts of a Table, Adding, Deleting New Rows / Columns, Moving a Table, Working with the Total Row, Removing Duplicate rows from a table. Sorting and Filtering a table. Formatting tools on the Home Tab, Mini Toolbar, Fonts, Text Alignment, Wrapping text to fit a cell, Colours and Shading, Borders and Lines, Miming Styles Conditional Formatting and Reporting: Format all Cells by using a Two Colour Scale, Format all Cells by using Data Bars quick formatting, referencing – Relative, Absolute, Mixed Referencing. Working with Formulas and Functions, Introduction to Chart Wizard.	
Unit 3: FUNCTIONS IN SPREADSHEET	**20**
Mathematical Functions: ROUND, COUNT, COUNIF, MIN, MAX, ROUND, INT, SQRT, Logical Functions: AND, FALSE, IF, IFERROR, NOT, OR, TRUE. Text Functions, Date and Time Functions Statistical Functions -Descriptive statistics- AVERAGE -MEAN, MEDIAN, MOD, STDEV, VAR, RSQ, DEVSQ, COVAR. Inferential Statistics - CHISQ.TEST, FTEST, TTEST, ZTEST. Financial Functions: Future Value (FV), FVSCHEDULE, Present Value (PV), Net Present, Value (NPV), XNPV, PMT, PPMT, Internal Rate of Return (IRR), Modified Internal Rate of Return (MIRR), XIRR, NPER, RATE, EFFECT, NOMINAL DB, SYD, SLD, Lookup Functions: Vlookup and Hlookup, transpose.	
Unit 4: DATA & DATA ANALYSIS	**10**
Formula Auditing: Trace Precedents, Trace Dependents Show Formula, Error Checking, using data menu in data analysis: Get external data: Getting data from– from web, from text, from other sources, sorting and filtering of data, Data tools: Remove Duplicate data, data validation, group and ungroup data, finding sub-totals, Data consolidation, What-if Analysis- Goal Seek, Scenario Manager, Tables. Pivot – table: Generating pivot-table, and generating pivot charts	
Unit 5: USE OF MACRO AND VBA IN SPREADSHEET	**6**
Use of Macro – definition and use, record a macro, assign a macro, run a macro, store a macro, entering formula in macro, use relative references, Introduction to VBA Programming, Create a basic calculator with VBA in Excel. Write some code in VBA (Visual Basic for Application) to manipulate records in Excel spreadsheet and work with VBA user form to build graphic user interface application.	

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Skill Development Activities:

1. What is the difference between formulas and functions with Example
2. What are the various categories of functions available in Excel?
3. Write the differences between Absolute cell Referencing and Relative cell Referencing
4. How to Create a basic calculator with VBA in Excel

Books for References:

1. Rajkumar S and Nagarajan G and Naveen Kumar M, Fundamentals of MS Excel, Jayvee International Publications, Bangalore.
2. Microsoft Excel Latest Version Inside Out – Mark Doge and Craig Stinson – PHI Learning Private Limited, New Delhi – 110001.
3. Excel 2013 Bible ;John Walkenbach, Wiley
4. Financial Analysis and Modeling using Excel and VAB: Chandan Sengupta, Wiley
5. Excel Data Analysis – Modeling and Simulation: Hector Guerreor, Springe
6. Microsoft Excel 2013: Data Analysis and Business Modeling: Winston, PHI
   Excel Functions and Formulas: Bernd Held, BPB Publications

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (BUSINESS ANALYTICS) 1.3 **Name of the Course: Statistics for Business Decisions-1**		
Course Credits	**No. of Hours per Week**	**Total No. of Teaching Hours**
4 Credits	**4 Hrs**	**56 Hrs**
Pedagogy : Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Field Work etc.		
Course Outcomes: On successful completion of the course, the Students will demonstrate a. Understand the requirements of statistical framework b. Construct and visualize the data. c. Determine measures of central tendency and dispersion. d. Construct index numbers		
Syllabus:		**Hours**
Unit.1: INTRODUCTION TO STATISTICS		**6**
Introduction – Meaning, Definition of Statistics, Origin and Development of Statistics, Importance and Scope of Statistics, Limitation of Statistics, Distrust of Statistics.		
Unit.2: DATA COLLECTION ORGANISATION & VISUALISATION		**12**
Data in Business environment, Collection of Data - Techniques of Data Collection – Census Technique and Sampling Technique (Concepts). Classification: Meaning, and Methods of Classification of Data, Tabulation: Meaning, Parts of a Table – Simple problems on Tabulation; Diagrammatic Presentation: Bar Diagrams – Simple Bars, Multiple Bars, Percentage Sub-divided Bar Diagram; Two Dimensional Diagrams – Pie Diagram.		
Unit.3: MEASURES OF CENTRAL TENDENCY		**12**
Measures of Central Tendency: Calculation of Arithmetic Mean, Median and Mode for Individual, Discrete and Continuous Series – Problems (Direct Method only); Geometric Mean (Simple problems), Empirical relation between Mean, Median and Mode.		
Unit.4: MEASURE OF DISPERSION		**12**
Dispersion: Mean Deviation, Variance, Standard Deviation, Coefficient of Variance, Quartile Deviation, Coefficient of QD, Covariance. Measures of Skewness: Calculation of Karl Pearson‘s co-efficient of skewness (Uni-modal).		

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Unit.5: INDEX NUMBER	**14**
Index number, Construction of Index number, Methods of Index number: Simple aggregative method, Weighted method (Fishers Ideal Index number). Tests of Adequacy (TRT, FRT). Consumer Price Index number.	
Skill Developments Activities: 1. Prepare a Pie Chart with imaginary figures. 2. Prepare a Blank Table and mention the parts of the table. 3. Prepare a Sub- Divided Bar Chart with imaginary figures. 4. Draw a Histogram using imaginary data and identify Mode.	
Reference Books: 1. S P Gupta: Statistical Methods- Sultan Chand 2. Dr. B N Gupta: Statistics, Sahithya Bhavan 3. S.C Gupta: Business Statistics, HPH 4. N.V.R Naidu: Operation Research I.K. International Publishers 5. Elhance: Statistical Methods, Kitab Mahal 6. Sanchethi and Kapoor: Business Mathematics, Sultan Chand 7. Veerachamy: Operation Research I.K. International Publishers 8. S. Jayashankar: Quantitative Techniques for Management 9. D.P Apte; Statistical Tools for Managers 10. Chikoddi & Satya Prasad: Quantitative Analysis for Business Decision, HPH **11.** Dr. Alice Mani: Quantitative Analysis for Business Decisions - I, SBH	

BBA (Business Analytics)

Name of The Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (BUSINESS ANALYTICS) 1.4
Name of the Course: FINANCIAL ACCOUNTING

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Understand the framework of accounting as well accounting standards.
b. Pass Journal entries, Posting to Ledger accounts and prepare Trial balance
c. Prepare various Subsidiary books
d. Prepare different Cash Book
e. Prepare Final accounts of proprietary concern.

SYLLABUS:	HOURS
Unit.1: Introduction to Financial Accounting	**12**

Introduction – Meaning, Definition, Scope, Objectives, Functions of Accounting – Terminologies used in Accounting - Users of Accounting Information – Limitations of Accounting; Accounting Principles- Accounting Concepts Conventions; Meaning of Double entry system – Process of Accounting – Types of Accounts – Traditional and Modern Accounting – Golden Rules of Debit and Credit.

Accounting Standards (Ind AS)-

Meaning, Definition, Need and Objectives – List of Accounting Standards issued by ICAI; Accounting Equations - Problems on Accounting Equations.

Unit.2:Journal, Ledger & Trial Balance	**12**

Meaning of Journal, Ledger & Trial Balance – Transaction Analysis – Journal – Ledger – Balancing of Accounts – Trial Balance – Simple Problems on Journal, Ledger Posting and Preparation of Trial Balance.

Unit.3: Subsidiary Books	**10**

Meaning – Types of Subsidiary Books – Preparation of Purchases Book- Purchase Returns Book - Proforma Invoice; Sales Book -Sales Return Book - Account Sales; Bills Receivable Book - Bills Payable Book. Simple Problems on the Purchases – Purchases Returns – Sales – Sales Returns – Bills Receivable and Payable Books.

Unit.4: Cash Book	**10**
Introduction - Types of Cash Book- Simple Cash Book, Double Column Cash Book, Three Column Cash Book and Petty Cash Book -Problems.	
Unit.5: Final Accounts of Proprietary Concern	**12**
Preparation of Statement of Profit and Loss and Balance Sheet of a proprietary concern with special adjustments like depreciation, outstanding expenses and prepaid expenses, outstanding incomes and incomes received in advance and provision for doubtful debts, interest on drawings and interest on capital. (Vertical Form)	
Skill Development Activities: 1. List out the Accounting Standards issued by ICAI 2. Prepare a Trial Balance with imaginary figures 3. Preparea Cash Book with imaginaryfigures. 4. Prepare a Profit and Loss Account and Balance Sheet of a Proprietary Concern with imaginary figures	
Books for References: 1. Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, Mc Graw-Hill Education, 13thEdition. 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. Horngren and Donna Philbrick, (2013) Introduction to Financial Accounting, Pearson Education, 11thEdition. 5. J.R. Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi, 32ndEdition. 6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6th Edition. 7. B.S. Raman (2008), Financial Accounting Vol. I & II, United Publishers & Distributors	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration **(**Business Analytics)

Course Code: BBA (BUSINESS ANALYTICS)2.1

Name of the Course: HUMAN RESOURCE MANAGEMENT PRACTICES

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Describe the role and responsibility of Human resources manager
b. Understand the HRP process, Recruitment and Selection process
c. Demonstrate the ability to understand the on-boarding process and Learning & Development aspects.
d. Analyse the criteria and methods of Employees' Performance Appraisal.
e. Understand the Compensation Structure in Organisations.

SYLLABUS:	HOURS
Unit-1: Introduction to Human Resource Management	**10**
Meaning and Definition of HRM – Features, Objectives, Importance, Functions and Process of HRM; Role of HR Manager, Trends influencing HR practices.	
Unit-2: Human Resource Planning, Recruitment & Selection	**14**
Human Resource Planning: Meaning and Importance of Human Resource Planning, Factors affecting HRP, Process of HRP; **Recruitment**–Meaning, Methods of Recruitment, Factors affecting Recruitment, Sources of Recruitment; **Selection**–Meaning, Process of Selection, Evaluation of Selection Process, Barriers to effective Selection, Steps for effective selection.	
Unit-3: On-boarding, Training, Development and Career Planning	**12**
On-Boarding- Meaning, Purpose of On-Boarding, Planning the On-Boarding program, Problems faced in On-boarding; **Training:** Need for training, Benefits of training, Methods of Training and Development; Evaluation of effectiveness of Training; **Career Planning and Development**- Need for Career Planning; Types -Horizontal and Vertical Progression, Technical, Managerial and Functional progression (Concepts only)	
Unit-4: Performance Appraisal	**12**
Performance appraisal: Meaning, Objectives and Process of Performance Appraisal; Methods of Performance Appraisal- Traditional and Modern methods of Performance Appraisal;Uses and Limitations of Performance Appraisal.	

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Unit-5: Compensation Management	**08**
Compensation Management- Meaning and Components of compensation structure; Factors influencing employee compensation; **Incentives**- Meaning, types of incentives-Monetary and Non-monetary incentives, Individual and Group Incentives; Incentives as a component of CTC	
Skill Development Activities: 1. Choose any MNC and present your observations on training programs conducted for employees. 2. Draw a chart showing different methods of Performance appraisal. 3. Draft a Pay structure based on the CTC of any Company. 4. List out the latest trends in Human Resource practices followed in companies.	
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 (Data Analytics) 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.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code: BBA (BUSINESS ANALYTICS)2.2** **Name of the Course: DBMS and SQL for Data Analytics**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF TEACHING HOURS**
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom lectures, tutorials, lab work etc.,		
Course Outcomes: On successful completion of the course, the students will be able a. To Understand Database System Concept and Data Models Management Systems b. To Understand Database design c. To Understand the Concept of Operation and Management. d. To Understand the application of SQL		
SYLLABUS:		**HOURS**
Unit. 1: INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS		**10**
Meaning and Definition of Database, Objectives of Database, Features of Database, Database System Concept and Architecture, Data models: HDBMS, NDBMS, RDBMS, OODBMS, Desktop and Server-level Database, Recent Trends in Database.		
Unit. 2: DATABASE DESIGN		**14**
Data Modeling Using the Entity Relationship Model: ER Model Concepts, Notation for ER Diagram, Mapping Constraints, Keys, Concepts of Super Key, Candidate Key, Primary Key, Generalization, Aggregation, Reduction of an ER Diagrams to Tables, Relationship of Higher Degree. Relational data Model and Language: Relational Data Model Concepts, Integrity Constraints, Entity Integrity, Referential Integrity, Keys Constraints, Domain Constraints, Relational Algebra, Normalization: Functional dependencies, normal forms, first, second, third normal forms, BCNF		
Unit. 3: OPERATIONS MANAGEMENT		**12**
Client / Server and Databases – Data Warehousing – Query Processing – Concurrency Management – Recovery – Security, Back-up and Recovery. Distributed Databases: Structure of Distributed Database; Trade-offs in Distributing the Database, Advantages of Data Distribution, Disadvantages of Data Distribution; Design of Distributed Databases, Data Replication, Data Fragmentation		

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Unit. 4: SQL STRUCTURED QUERY LANGUAGE	**10**
Introduction on SQL: Characteristics of SQL, Advantage of SQL. SQl Data Type and Literals. Types of SQL Commands. SQL Operators and Their Procedure. Tables, Views and Indexes. Queries and Sub Queries. Aggregate Functions. Insert, Update and Delete Operations, Joins, Unions, Intersection, Minus.	
Unit. 5: PRACTICAL PROBLEMS AND LAB-WORK ON SQL	**10**
Practical Problems And Lab-Work On SQL	

Skill Development Activities:

1. Draw an ER Diagram for Company Database
2. Explain SQL Joins in Detail
3. Explain Aggregate Functions in SQL with Examples.
4. Given BOOK (Bookid, Bookname, Authorid, Publisher) and AUTHOR (Authorid, Authorname, Country,age)
   - Create the above two tables with proper primary key and foreign key constraint.
   - Insert 5 rows to the table.
   - Show the foreign key violation.
   - Delete the column age in Author table
   - Retrieve bookname and publisher from Book table.

References Books:

1. Gary W.Hansen and James V.Hansen, ―Database Management and Design‖ Prentice Hall
2. C.S.V.Murthy – Data Base Management Systems-HPH
3. C.Laudon. management information-systems, 6 th edition, published in the year 2000. p. 6.
4. DR. Milind M. Oka. Management information systems. Everest Publishing House,p.3 5. Gordon. B. Davis & M. H. Olson. Management Information Systems.. Conceptual Foundations, structure and development. Second Edition. P. 6
5. Jacek Błażewicz, et al., ―Handbook on parallel and distributed processing‖, Springer Science & Business Media, 2013.
6. O_Brien James — A Management Information Systems, Tata Mc Graw Hill, New Delhi.

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (BUSINESS ANALYTICS) 2.3 **Name of the Course: Statistics for Business decisions-2**		
Course Credits	**No. of Hours per Week**	**Total No. of Teaching Hours**
4 Credits	**4 Hrs**	**56 Hrs**
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: a. Develop Proficiency in Statistical Methods b. Understand and Apply Time Series Analysis c. Perform Interpolation and Extrapolation d. Evaluate Population Theories and Techniques e. Analyze Demographic and Vital Statistics		
Syllabus:		**Hours**
Unit.1: CORRELATION, REGRESSION ANALYSIS		**12**
Coefficient of Correlation: Covariance, Karl Pearsons Coefficient of Correlation. **Simple Linear Regression**: Introduction to Simple Linear regression, Determining Equation of Regression Line (x on y and y on x), Measure of Variation (Coefficient of Determination, Standard Error of the Estimate), Statistical Inference about the slope and Testing the Overall Regression Model.		
Unit.2: TIME SERIES ANALYSIS		**12**
Introduction, Components of a Time Series: Secular trend, Short term variation, Random or irregular variation. Components of Time series, Time Series Models (Additive, Multiplicative), Measurement of trend: Graphical or free hand curve fitting method, Semi-Average method, Least square method, Moving average method (2 yearly, 3yearly, 4yearly and 5yearly moving averages)		
Unit.3: INTERPOLATION AND EXTRAPOLATION		**10**
Introduction: Assumptions, uses of interpolation and extrapolation. Methods of Interpolation: Graphic Method, Newton‘s forward difference method, Newton‘s backward difference method, Introduction to Binomial expansion method (derivation only).		
Unit.4: VITAL STATISTICS		**12**
Meaning of demography and Vital statistics. Methods of collection of Vital Statistics and uses.Fertility, growth and mortality rates. Definition of fertility and fecundity. Fertility rates- CBR, ASFR, GFR and TFR (Problems). Growth rate- Gross reproduction rate and Net reproduction rate (Problems). Mortality rates- CDR, ASDR, S.T.D.R.(Problems) IMR, NMR and MMR (Theory Only).		

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Unit.5: Statistical Quality Control	**12**
Introduction to SQC, Uses of SQC, Process and Product Control, Control Charts: Upper Control Limit, Lower Control Limit, Central Line. Construction and Statistical basis of 3-σ Control charts (X-bar & R-chart, X-bar & s-chart np-chart, p-chart, c-chart and u-chart)[Theory Only], Rational Sub-grouping.	
Skill Developments Activities: 1. Calculate Regression for an imaginary dataset. 2. Differentiate between additive and multiplicative time series models. 3. Calculate Correlation for an imaginary dataset. 4. List any five uses of Statistical Quality Control	
Reference books: 1. S C Gupta: Fundamentals of Statistics – Himalaya Publishing House 2. Andrew F Siegel: Practical Business Statistics – Elsevier Inc. 3. Anderson: Statistics for Business & Economics – Cengage. 4. Nathan Keyfitz , Hal Caswell: Applied Mathematical Demography 5. S P Gupta: Statistical Methods- Sultan Chand 6. Dr. B N Gupta: Statistics, Sahithya Bhavan 7. Elhance: Statistical Methods, Kitab Mahal 8. Sanchethi and Kapoor: Business Mathematics, Sultan Chand 9. Veerachamy: Operation Research I.K. International Publishers 10. S. Jayashankar: Quantitative Techniques for Management 11. D.P Apte; Statistical Tools for Managers.	

BBA (Business Analytics)

Name of The Program: Bachelor of Business Administration (Business Analytics) **Code: BBA (BUSINESS ANALYTICS) 2.4** **Name of the Course: CORPORATE ACCOUNTING**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF 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: a. Understand Issue of Shares. b. Determine the Liability of underwriters as per underwriting agreement. c. Find out Capital and Revenue profits by preparing the Statement of P/L. d. Prepare Final Account of Companies as per Schedule – III of Companies Act, 2013. e. Prepare Liquidator's Final Statement of Account		
SYLLABUS:		**HOURS**
Unit.1: ISSUE OF SHARES		**10**
Meaning of Share, Types of Shares – Preference shares and Equity shares – Issue of Shares at par, at Premium, at Discount: Journal Entries relating to issue of shares –Calls -in- arrears – Forfeiture and Re-issue of Shares.		
Unit.2: UNDERWRITING OF SHARES		**12**
Meaning of Underwriting – SEBI regulations regarding underwriting; Underwriting commission – Types of underwriting agreement – Conditional and Firm; Determination of Liability in respect of underwriting contract – fully underwritten and partially underwritten – with and without firm underwriting.		
Unit.3: PROFIT PRIOR TO INCORPORATION		**10**
Introduction - Meaning – calculation of sales ratio – time ratio – weightedratio – treatment of capital and revenue expenditure – Ascertainment of pre-incorporation and post-incorporation profits by preparing statement of Profit and Loss (Vertical Format) as per schedule III of Companies Act, 2013.		
Unit.4: FINAL ACCOUNTS OF JOINT STOCK COMPANIES		**12**
Statutory Provisions regarding preparation of Company's Financial Statements – Treatment of Special Items, Tax deducted at source, Advance payment of Tax, Provision for Tax, Depreciation, Interest on debentures, Dividends, Rules regarding payment of dividends, Transfer to Reserves (Theory) Problems on Preparation of Statement of Profit and Loss and Balance Sheet as per Schedule – III of Companies Act, 2013.		

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Unit.5: CORPORATE FINANCIAL REPORTING PRACTICES	**12**
Corporate Financial Reporting - Meaning, Types, Objectives, Characteristics of Corporate Financial Report, Users of Corporate Financial Report, Components of Corporate Financial Report; General Corporate Information, Financial Highlights, Letter to the shareholders from the CEO, Management's Discussion and Analysis Financial Statements (Theory Only)- Balance sheet, Income Statement, Cash flow Statement and Notes to Accounts, Meaning and Contents of Auditors Report, Corporate Governance Report and CSR Report	
Skill Development Activities: 1. Give Accounting Treatment in the form of Journal for Issue of Shares at par, at Premium and at Discount with imaginary figures. 2. Prepare with imaginary figures computation of Unmarked Application at the time of Underwriting of Shares. 3. List the contents of an Annual Report. 4. Prepare Balance Sheet with imaginary figures as per Schedule – III of Companies Act,2013	
Books for References: 1. Hanif and Mukherjee, Corporate Accounting, Mc. Graw Hill Publishers 2. S P Jain and K. L. Narang, Financial Accounting, Kalyani Publication 3. Dr. S Anil Kumar, Dr. V Rajesh Kumar and Dr. B Mariyappa, Corporate Accounting, HPH 4. Dr. S.N. Maheswari, Financial Accounting, Vikas Publication 5. Soundrajan & K. Venkataramana, Financial Accounting, SHBP. 6. A Bannerjee; Financial Accounting. 7. Radhaswamy and R.L. Gupta, Advanced Accounting, Sultan Chand 8. M.C. Shukla and Grewal, Advanced Accounting.	

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 3.1
Name of the Course: PRINCIPLES OF MARKETING

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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
a. Understand the concepts and functions of Marketing.
b. Analyze Marketing Environment impacting the Business.
c. Segment the Market and understand the Consumer Behaviour
d. Describe the 4 P's of marketing and design the Marketing Mix.

SYLLABUS:	HOURS
Unit-1:Introduction to Marketing	**08**

Marketing: Meaning and Definition, Concepts of Marketing, Approaches to Marketing, Functions of Marketing. Recent trends in Marketing-E- business, Tele-marketing, M-Business, Green Marketing, Relationship Marketing, Concept Marketing, Digital Marketing, Social Media Marketing and E-tailing (Meaning only).

Unit- 2: Marketing Environment	**10**

Micro Environment – Meaning, Components- The company, suppliers, Marketing Intermediaries, competitors, public and customers;
Macro Environment- Meaning, Components- Demographic, Economic, Natural, Technological, Political, Legal, Socio-Cultural Environment.

Unit-3: Market Segmentation and Consumer Behaviour	**10**

Market Segmentation - Meaning, Bases of Market Segmentation, Requisites of Sound Market Segmentation;
Consumer Behaviour – Meaning and Importance, Factors influencing Consumer Behaviour; Consumer Buying Decision Process.

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Unit- 4:Marketing Mix -Product & Pricing	**14**

Marketing Mix- Meaning, Elements of Marketing Mix (Four P's) – Product, Price, Place, Promotion.
Product-Meaning & features, Product Classification, Product Line & Product Mix decisions; Product Lifecycle – Meaning & stages in PLC; New Product Development Meaning and steps in NPD; Reasons for Failure of New Product.
Pricing – Objectives, Factors influencing Pricing Policy, Methods of Pricing; Pricing Strategies

Unit- 5: Marketing Mix – Promotion & Distribution	**14**

Promotion – Meaning and Significance of Promotion.
Advertising – Meaning and Objectives, Types of Advertisement, Characteristics of an effective Advertisement.
Personal Selling- Meaning and Importance, Characteristics of a Successful Sales person.
Sales Promotion- Meaning, Objectives, Promotional Schemes, Limitations of Promotional Schemes.
Physical Distribution–Meaning and Types of Channels of Distribution, Types of Intermediaries, Factors affecting Channel Selection

Skill Development Activities:
1. Design a Marketing Mix for an imaginary product.
2. Write the tagline for any five companies/products of your choice.
3. Write a note on any five recent promotional schemes used in marketing a product.
4. Prepare a chart showing channels of distribution for any product.

Books for References:

1. Philip Kotler, Marketing Management, Prentice Hall.
2. Lovelock Christopher, Services Marketing: People, Technology, Strategy, PHI, New Delhi
3. William J. Stanton, Michael J.Etzel, Bruce J Walker, Fundamentals of Marketing, McGraw Hill
4. Bose Biplab, Marketing Management, Himalaya Publishers.
5. J.C. Gandhi, Marketing Management, Tata McGraw Hill.
6. Ramesh and Jayanti Prasad: Marketing Management, I.K. International 7. Sontakki, Marketing Management, Kalyani Publishers.
7. PN Reddy and Appannaiah, Marketing Management
8. Saxena Rajan,(2017)Marketing Management , Tata McGraw - Hill Publishing Company Ltd., New Delhi. Fifth Edition.

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 3.2
Name of the Course: ORGANIZATIONAL BEHAVIOUR

COURSECREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, Tutorials, Role Plays and Case study method.

Course Outcomes: On successful completion of the course, the students will:

a. Demonstrate an understanding of the role of OB in business organization.
b. Demonstrate an ability to understand individual and group behavior in an organization.
c. Be able to explain the effectiveness of organizational change and development of organisation.
d. Demonstrate an understanding of the process of organizational development and OD Interventions.

SYLLABUS:	HOURS
Unit- 1 : Introduction to Organizational Behaviour	**16**

Organization Behaviour– Meaning, Definition, Importance and Foundations of OB.
Foundations of Individual Behaviour - Personal Factors, Environmental Factors, Psychological Factors, Organization systems and resources;
Learning- Meaning, features and Theories- Classical Conditioning Theory and Operant Theory
Personality-Meaning, Determinants and Personality Traits.
Perception- Meaning, Factors influencing perception, Perceptual Process, Perceptual Errors.

Unit- 2: Group and Team Dynamics	**10**

Group Dynamics-Meaning, Types of Groups, Development of Groups- Stages of Group Development, Determinants of Group Behaviour; Team Dynamics- Meaning, Types of Teams; Conflict- Sources of conflict and ways of resolving conflict.

Unit -3: Change Management	**8**

Change: Meaning, Importance and Nature of Planned Change, Factors Influencing Change, Change Process; Change Management – Meaning and importance; Managing Change- Causes of resistance to change, Consequences of resistance to change, Overcoming Resistance to Change.

Unit- 4: Organizational Development	**12**
Organizational Development: Meaning and Nature of Organizational Development (OD), Process of Organizational Development; Overview of Entering and Contracting; Diagnosing: Meaning of Diagnosing, Comprehensive Model for Diagnosing Organizational Systems: Organizational Level, Group Level and Individual Level systems.	
Unit -5: Organizational Development Interventions	**10**
OD Interventions: Overview of OD interventions - Human Process Interventions, Techno Structural Interventions, HRM Interventions and Strategic Change Interventions, Conditions for optimal success of OD; Designing Effective OD Interventions; Process of design effective Interventions	
Skill Developments Activities: 1. List any 5 factors influencing Change in Organizations. 2. Draw Blake and Mouton managerial grid. 3. List the Personality Traits of Successful Business Leaders. 4. List the sources of conflict in organisations	
Books for References: 1. Fred Luthans, Organizational Behaviour. McGraw Hill 2. Robbins, Organizational Behaviour, International Book House. 3. John W. Newstrom and Kieth Davis, Organizational Behaviour, McGraw Hill. 4. K. Aswathappa, Organizational Behaviour, HPH. 5. Appanniah and, Management and Behavioural Process, HPH 6. Sharma R.K and Gupta S.K, Management and Behaviour Process, Kalyani Publishers. 7. Rekha and Vibha – Organizational Behavioural, VBH. 8. P.G. Aquinas Organizational Behaviour, Excel Books. 9. M. Gangadhar. V.S.P.Rao and P.S.Narayan, Organizational Behaviour	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: Course Code: BBA (Business Analytics) 3.3
Name of the Course: C PROGRAMING

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Understand the foundational concepts of C programing.
b. Develop, compile, and execute basic C programs.
c. Utilize data structures effectively for data storage and retrieval.
d. Implement file operations for data analytics applications.
a. Apply C programming skills to basic data analytics tasks.

Syllabus:	HOURS
Unit No. 1: Introduction to C Programming	**8**
Introduction to Programing- Meaning, Role of programing in data analytics; Difference between compiled and interpreted languages. Introduction to C Language-History and Importance of C- Structure of a C program-Compilation and execution process. Basic I/O Operations- printf() and scanf() functions, Reading and displaying data.	
Unit No. 2: Data Types and Operators	**8**
Data Types -Basic data types: int, float, char, double-Derived data types: arrays, structures, unions, pointers. Variables and Constants-Declaration and initialization-Scope and lifetime. Operators-Arithmetic operators- Relational operators- Logical operators- Assignment operators-Bitwise operators- Conditional (ternary) operators	
Unit No. 3: Control Structures and Functions	**10**
Control Structures-Decision-making statements: if, if-else, switch. Looping statements: for, while, do- while. Jump statements: break, continue, goto. Functions-Introduction to functions- Types of functions: standard library and user-defined functions- Function declaration, definition, and call, Scope and lifetime of function variables, Recursion.	

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Unit No. 4: Data Structures in C	**10**
Arrays- Introduction to arrays, Types of arrays: single-dimensional and multi-dimensional-Operations on arrays: insertion, deletion, traversal. Strings Introduction to strings, String operations: length, compare, concatenate, copy.Pointers-Introduction to pointers, Pointer arithmetic, Pointers with arrays, strings, and functions. Structures and Unions-Defining structures and unions, Accessing members	
Unit 5: File Operations and Applications in Data Analytics	**20**
File Handling-Introduction to files-Types of files: text and binary-File operations: open, close, read, write, seek. Applications in Data Analytics-Basic data preprocessing using C, Data visualization basics-Introduction to searching and sorting algorithms, File-based data analytics: reading datasets, basic statistical calculations.	
Skill Developments Activities: 1. Write the basic data types 2. Explain the various types of functions in C programme 3. List out the different types of arrays 4. Write a note on the searching and sorting algorithm	
Books for Reference: 1. "The C Programming Language" by Brian W. Kernighan and Dennis M. Ritchie 2. "C: The Complete Reference" by Herbert Schildt 3. "Data Analysis with C" by Tony Fischetti 4. "Operating System Concepts" by Abraham Silberschatz, Peter B. Galvin, and Greg Gagne 5. "Introduction to Information Systems: Supporting and Transforming Business" by R. Kelly Rainer & Brad Prince 6. "Database System Concepts" by Abraham Silberschatz, Henry F. Korth, and S. Sudarshan 7. "C Programming Absolute Beginner's Guide (3rd Edition)" by Greg Perry and Dean Miller 8. "Programming in ANSI C" by E. Balagurusamy 9. "C Programming for the Absolute Beginner" by Michael Vine 10. "Pointers in C: A Hands on Approach" by Hrishikesh Dewan & Naveen Toppo.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 3.4
Name of the Course: FUNDAMENTALS OF COST ACCOUNTING

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, Case studies, Tutorial classes, Group discussions, Seminar & fieldwork etc.,

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

a. Demonstrate an understanding of the concepts of costing and cost accounting.
b. Classify, allocate apportion overheads and calculate overhead absorption rates.
c. Demonstrate the ability to calculate labour cost.
d. Demonstrate the ability to prepare a cost sheet.
e. Prepare material-related documents, understand the management of stores and issue procedures

SYLLABUS:	HOURS
Unit.1: Introduction to Cost Accounting	**8**
Introduction- Meaning and definition- Objectives, Importance and Uses of Cost Accounting, Difference between Cost Accounting and Financial Accounting; Various Elements of Cost and Classification of Cost; Cost object, Cost unit, Cost Centre; Cost reduction and Cost control. Limitations of Cost Accounting.	
Unit 2: **Cost Sheet**	**14**
Cost Sheet - Meaning and Cost heads in a Cost Sheet, Preparation of Cost Sheet - Problems on Cost Sheets (including Unit Costing and Tenders & Quotations).	
Unit.3: Material Cost	**12**
Material Cost: Meaning, Importance of Material cost; Types of Materials – Direct and Indirect Materials; **Procurement**- Procedure for procurement of materials and documentation involved in materials accounting; **Material Storage**: Duties of Store keeper; **Issue of Materials**- Pricing of material issues, Preparation of Stores Ledger Account under FIFO, LIFO, Simple Average Price and Weighted Average Price Methods – Problems. **Materials control**. - Techniques of Inventory Control - Problems on Level Setting and EOQ.	
Unit.4: Labour Cost	**8**
Labour Cost: Meaning and Types of labour cost –Attendance Procedure-Time keeping and Time booking and Payroll Procedure; Idle Time- Causes and Treatment of Normal and Abnormal Idle time, Over Time- Causes and Treatment (theory only). Labour Turnover: Meaning, Reasons and Effects of labour turnover Methods of Wage Payment: Time rate system and piece rate system; Incentive schemes - Halsey plan, Rowan plan –problems based on calculation of wages and earnings using Time Rate, Piece Rate, Halsey & Rowan only.	

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Unit.5: Overheads	**14**
Overheads: - Meaning and Classification of Overheads; Accounting and Control of Manufacturing Overheads: Collection, Allocation, Apportionment, Re-apportionment and Absorption of Manufacturing Overheads; Problems on Primary and Secondary overheads distribution using Reciprocal Service Methods (Repeated Distribution Method and Simultaneous Equation Method); Absorption of Overheads: Meaning and Methods of Absorption of Overheads (Concept only); Problems on calculation of Machine Hour Rate.	
Skill Development Activities: 1. Mention the causes of labour turnover in manufacturing organisations. 2. Name any five documents used for material accounting 3. Prepare a dummy Payroll with imaginary figures. 4. List out the various overhead items under Factory, administrative, Selling & distribution overheads (five items each).	
Books for References: 1. Jain, S.P. and K.L. Narang. Cost Accounting: Principles and Methods. Kalyani Publishers 2. Arora, M.N. Cost Accounting – Principles and Practice, Vikas Publishing House, New Delhi. 3. Maheshwari, S.N. and S.N. Mittal. Cost Accounting: Theory and Problems. Shri Mahavir Book Depot, New Delhi. 4. Iyengar, S.P. Cost Accounting, Sultan Chand & Sons 5. Charles T. Horngren, Srikant M. Datar, Madhav V. Rajan, Cost Accounting: A Managerial Emphasis, Pearson Education. 6. Jawahar Lal, Cost Accounting., McGraw Hill Education 7. Madegowda J, Cost Accounting, HPH. 8. Rajiv Goel, Cost Accounting, International Book House	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 3.5 **Name of the Course: DATA ANALYSIS USING TABLEAU**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF TEACHING HOURS**
2 CREDITS	3 HOURS	30 HOURS
Pedagogy: Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Review of Journals and Books etc.		

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

a. Understand the foundational principles of data visualization.
b. Utilize Tableau's features to connect to various data sources and build visualizations.
c. Construct meaningful dashboards tailored to specific business needs.
d. Implement advanced visualization techniques, calculations, and parameters to extract deeper insights.
e. Share, publish, and apply Tableau skills in real-world data analytics scenarios relevant to commerce.

SYLLABUS:	**HOURS**
Unit 1: Introduction to Data Visualization and Tableau	**10**

Introduction to Data Visualization: Importance, principles, types of visual representations (charts, graphs, dashboards), role in analytics. **Introduction to Tableau:** History, industry importance, Tableau Desktop, Tableau Server, and Tableau Public. **Getting Started with Tableau:** Interface overview, connecting to data sources (spreadsheets, databases, web data). **Basic Visualization Techniques:** Drag-and-drop features, creating basic charts (bar, line, pie, scatter plots, histograms), dashboard basics.
[Lab Sessions]

Unit 2: Advanced Data Visualization and Dashboard Design	**10**

Advanced Visualization Techniques: Maps, geographical data, heat maps, tree maps, bubble charts, dual-axis, and combined charts. **Filters, Sorting, and Groups:** Using filters for insights, sorting data, creating and using groups and sets. **Calculated Fields and Parameters:** Creating calculated fields, aggregations, deeper insights, introduction to parameters. **Advanced Dashboard Design:** Best practices, interactivity (actions, filters, tooltips, visual grouping), formatting.
[Lab Sessions]

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Unit 3: Sharing, Publishing, and Real-World Applications	**10**
Publishing and Sharing in Tableau: Introduction to Tableau Server and Tableau Public, sharing dashboards and reports, best practices for secure data sharing. **Real-World Applications and Case Studies:** Using Tableau for e-commerce, financial data visualization, customer feedback analysis, and market research. **[Lab Sessions]**	
Skill Development Activities: 1. Write a report on the role of data visualization in analytics 2. Demonstrate the use of filters, sorting, and groups 3. Write a step-by-step guide on publishing Tableau dashboards	
Books for References: 1. "Tableau Your Data! Fast and Easy Visual Analysis with Tableau Software" by Daniel 2. G. Murray 3. "Tableau 10 Business Intelligence Cookbook" by Donabel Santos 4. Tableau Official Documentation and Tutorials	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 4.1 **Name of the Course: BUSINESS DATA ANALYTICS**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF TEACHING HOURS**
4 CREDITS	**4 HOURS**	**56 HOURS**
Pedagogy: Class rooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Out comes: On successful completion of the course, the Students will be able to a. Explain the fundamental concepts of Business Data Analytics. b. Differentiate between quantitative and qualitative analysis techniques. c. Use analytical tools and techniques to derive insights from data. d. Interpret analytical results to support business decisions. e. Develop analytical models for business case studies.		
Syllabus:		**HOURS**
Unit No. 1: Introduction to Business Data Analytics		**06**
Definition and Scope of Business Data Analytics, Importance of Data Analytics in Business Decision-Making, Types of Business Analytics: Descriptive, Diagnostic, Predictive, and Prescriptive, Quantitative vs. Qualitative Analysis: Concepts and Differences, Tools for Business Data Analytics (Introduction to Excel, Power BI, and Python) *Practical: Basic operations in Excel and introduction to Power BI dashboards*		
Unit No. 2: Data Collection, Cleaning, and Visualization		**10**
Sources of Business Data (Primary and Secondary), Data Collection Methods (Surveys, Web Scraping, Transactional Data), Data Cleaning Techniques: Handling Missing Values, Outliers, and Duplicates, Data Visualization Techniques: Charts, Graphs, and Dashboards, Tools for Data Visualization: Excel, Power BI, and Tableau *Practical: Creating dashboards and charts using Excel and Power BI.*		
Unit No. 3: Quantitative Analysis Techniques		**14**
Statistical Analysis: Measures of Central Tendency, Dispersion, and Correlation, Hypothesis Testing: t-tests, Chi-square tests, and ANOVA, Regression Analysis: Simple and Multiple Linear Regression, Time Series Analysis: Moving Averages, Trend Analysis, and Forecasting, Machine Learning Basics: Classification and Clustering Techniques(Theory Only) *Practical: Hands-on exercises in Excel for executing Time series analysis and Regression.*		

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Unit No. 4: Qualitative Analysis Techniques	**10**
Understanding Qualitative Data: Text, Images, and Interviews, Sentiment Analysis and Text Mining, Thematic Analysis for Business Insights, Tools for Qualitative Analysis: NVivo, Orange, and Python (NLTK Library) **[Theory Only]**	
Unit 5: Business Applications, Ethics and Data Privacy	**16**
Marketing Analytics: Customer Segmentation, Market Basket Analysis, **Financial Analytics:** Risk Analysis and Fraud Detection, **HR Analytics:** Employee Performance and Retention Analysis, **Supply Chain Analytics:** Demand Forecasting and Inventory Optimization. **[Theory Only];** Ethical Issues in Business Data Analytics, Data Privacy Regulations (GDPR, HIPAA, Indian IT Act)	
Skill Developments Activities: 1. Compare and contrast different types of business analytics 2. List and explain commonly used tools for business data analytics with their practical applications. 3. List out the different types of charts used for data visualization and their purposes. 4. Write a note on any one machine learning technique and its application in business analytics.	
Reference Books: 1. Evans, James R. Business Analytics: Methods, Models, and Decisions, McGraw Hill publication 2. Davenport, Thomas H., Competing on Analytics, Harvard Business School Press, United States. 3. Albright, Winston, Business Analytics: Data Analysis & Decision Making, South-Western College Publishing 4. Provost, Foster & Fawcett, Data Science for Business, O'Reilly Media	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 4.2 **Name of the Course: FINANCIAL MANAGEMENT**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF 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: a. Understand the Role of Financial Managers effectively in an organization b. Apply the compounding & discounting techniques for time value of money. c. Take investment decision with appropriate capital budgeting techniques for investment proposals. d. Understand the factors influencing the capital structure of an organization. e. Understand the factors influencing the working capital requirements of an organization		
Syllabus:		**HOURS**
Unit.1: Introduction to Financial Management		**10**
Financial Management: Meaning and definition of Financial Management- Goals of Financial Management-Scope of Financial Management-Functions of Financial Management Role of Finance Manager. **Financial planning:** Meaning –Need – Importance -Steps in financial Planning – Principles of a sound financial plan and Factors affecting financial plan. Source of funds – Long and Short term sources of funds (A brief overview)		
Unit-2: Capital Structures and Leverages		**12**
Introduction-Meaning and Definition of Capital Structure, Factors determining the Capital Structure, Concept of Optimum Capital Structure, EBIT-EPS Analysis. Leverages: Meaning and Definition, Types of Leverages- Operating Leverage, Financial Leverage and Combined Leverages. (Theory and Problems)		
Unit.3: Time Value of Money		**10**
Introduction – Meaning of time value of money-time preference of money- Techniques of time value of money: Compounding Technique-Future value of Single flow. Multiple flow and Annuity – Perpetuity-Discounting Technique-Present value of Single flow, Multiple flow – and Annuity. (Theory and Problems)		

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Unit-4: Capital Budgeting	**16**
Introduction-Meaning and Definition of Capital Budgeting, Features, Significance – Steps in Capital Budgeting Process. Techniques of Capital budgeting: Traditional Methods – Pay Back Period, and Accounting Rate of Return – DCF Methods: Net Present Value- Internal Rate of Return and Profitability Index- (Theory and Problems).	
Unit-5: Working Capital Management	**08**
Introduction- Meaning and Definition, types of working capital, Operating cycle, Determinants of working capital needs-Sources of working capital- Merits of adequate working capital - Dangers of excess and inadequate working capital. (Theory only).	
Skill Development Activities: 1. Prepare the list of Functions of Finance Manager. 2. As a finance manager of a company, design an appropriate Capital Structure. 3. Evaluate a capital investment proposal by using NPV method with imaginary figures. 4. Calculate EBIT and EPS with imaginary figures.	
Books for References: 1. 1.IM Pandey, Financial management, Vikas publications, New Delhi. 2. 2.Abrish Guptha, Financial management, Pearson. 3. 3.Khan & Jain, Basic Financial Management, TMH, New Delhi. 4. 4.S N Maheshwari, Principles of Financial Management, Sulthan Chand & Sons, New Delhi. 5. Chandra & Chandra D Bose, Fundamentals of Financial Management, PHI, New Delhi. 6. 6.Ravi M Kishore, Financial Management, Taxman Publications 7. 7.Prasanna Chandra, Financial Management, Theory and Practice, Tata McGraw Hill.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 4.3
Name of the Course: RESEARCH METHODOLOGY

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, tutorials, Group discussion, Seminar, Case studies & field work, WBL, literature reviews etc.,

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

a. Explain the fundamental concepts, scope, and methodologies of business research.
b. Apply appropriate research problem formulation, hypothesis development, and sampling techniques to real-world business scenarios.
c. Analyse collected data using statistical tools and techniques to derive meaningful business insights.
d. Critically evaluate research findings and test hypotheses using appropriate statistical methods.
e. Design and develop a well-structured research report with proper interpretation, visualization, and ethical considerations.

SYLLABUS:	HOURS
Unit 1: Introduction to Business Research	**10**
Research: Meaning, Purpose, Scientific method, types of research; scope of business research. Review of literature: need, purpose, notes taking.	
Unit 2: Research Design	**12**
Selection and formulation of a research problem, formulation of hypothesis, operational definition of concepts, sampling techniques. Research Design: Meaning, nature, process of preparation, components of research design.	
Unit 3: Data Collection and Processing	**12**
Data: Sources of data, methods, of collection; observation interviewing, mailing; tools for collection data; interview schedule, interview guide, questionnaire, rating scale, socio-metric, check list; pre-testing of tools, pilot study. Processing of data; checking, editing, coding, transcription, tabulation, preparation of tables, graphical representation.	

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Unit 4: Tools for Data Analysis	**12**
Statistical Techniques: Descriptive Statistics -Mean, Median, Mode, Standard Deviation, Mean Deviation and Quartile Deviation; Inferential Statistics -t-test, Chi-square test and ANOVA & Regression analysis [Meaning and application of each in Business Research]. **Data analysis tools for Social Science Research**: Python, R, SPSS, Tableau and Excel (Concepts and application only)	
Unit 5: Research Reports	**10**
Research Reports- Characteristics of good Research Report, types of reports, style of report writing, Steps in drafting the Report.	
Skill Developments Activities: 1. Design a questionnaire for a research study 2. List the different types of sampling techniques with suitable examples. 3. List the statistical software tools used in social science research. 4. Write a sample research report outline with an introduction, methodology, and conclusion.	
Books for References: 1. Dr. M. Ranganatham, O R Krishnaswami, P N Harikumar: Research Methodology , Himalaya Publishing House. 2. C.R. Kothari, Research Methodology: Methods and Techniques, New Age International Publishers 3rd Edition. 3. Wayne C. Booth, Gregory G. Colomb, Joseph M. Williams, Joseph Bizup, and William T. Fitzgerald, "The Craft of Research", University of Chicago Press, Fourth Edition. 4. Ingeman Arbnor and Björn Bjerke, Methodology for Creating Business Knowledge, Sage Publications, 3rd Edition. 5. Krishna G. Palepu and Paul M. Healy, Business Analysis and Valuation: Using Financial Statements, Cengage Learning, 5th Edition. 6. Joseph F. Hair Jr., Mary Celsi, Arthur H. Money, Phillip Samouel, and Michael J. Page, Essentials of Business Research Methods, Routledge 5th Edition. 7. Satyaprasad and D. R. Satya Raju, Business Research Methods, Himalaya Publishing House 2nd edition. 8. Navdeep Kaur and Dr. Pawan Kumar Taneja, Business Research Methods: A South-Asian Perspective, Kalyani Publishers 1st Edition.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 4.4 **Name of the Course: CUSTOMER RELATIONSHIP MANAGEMENT**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF TEACHING HOURS**
4 CREDITS	**4 HOURS**	**56 HOURS**
Pedagogy : Classrooms lecture, Case studies, Tutorial Classes, Group discussion, Seminar & field work etc.,.		
Course Outcomes: On successful completion of the course, the students will be able to a. To be aware of the nuances of customer relationship. b. To analyze the CRM link with the other aspects of marketing. c. To impart the basic knowledge of the Role of CRM in increasing the sales of the company. d. To make the students aware of the different CRM models in service industry. e. To make the students aware and analyze the different issues in CRM		
Syllabus:		**HOURS**
UNIT 1: Evolution of Customer Relationship & CRM Concepts		**12 Hrs**
Evolution of Customer Relationship: Introduction - CRM- Definition, Emergence of CRM Practice, Factors responsible for CRM growth, CRM process, framework of CRM, Benefits of CRM, Types of CRM. **CRM Concepts:** Acquiring Customers, Customer Loyalty and Optimizing Customer Relationships; CRM Definition; Success Factors -- The three levels of Service/ Sales Profiling; Service Level Agreements (SLAs), Creating and Managing effective SLAs.		
UNIT 2:CRM in Marketing		**12 Hrs**
One-to-one Relationship Marketing; Cross Selling & Up Selling; Customer Retention; Behavior Prediction - Customer Profitability & Value Modeling; Channel Optimization; Event-based marketing; CRM and Customer Service - The Call Centre, Call Scripting, Customer Satisfaction Measurement.		
UNIT 3: Sales Force Automation		**12 Hrs.**
Sales Process, Activity; Contact- Lead and Knowledge Management; Field Force Automation; CRM links in E-Business; E-Commerce and Customer Relationships on the Internet; Enterprise Resource Planning (ERP); Supply Chain Management (SCM); Supplier Relationship Management (SRM); Partner Relationship Management (PRM)		

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UNIT 4: Analytical CRM	**12 Hrs.**
Managing and Sharing Customer Data; Customer Information Databases - Ethics and Legalities of Data use; Data Warehousing and Data Mining concepts; Data Analysis - Market Basket Analysis (MBA), Click stream Analysis, Personalization and Collaborative Filtering	
UNIT 5: CRM Implementation	**08 Hrs**
Defining Success Factors; Preparing a Business Plan Requirements, Justification and Processes; Choosing CRM Tools - Defining Functionalities - Homegrown versus Out-Sourced Approaches; Managing Customer Relationships - Conflict, Complacency; Resetting the CRM Strategy; Selling CRM Internally; CRM Development Team, Scoping and Prioritizing, Development and Delivery, Measurement	
Skill Development Activities: 1.Present any two CRM models in a Diagrammatic form. 2.List out the challenges of CRM implementation in business operations 3.Present the flow-chart of CRM implementation. 4.Develop an imaginary customer database for any product of student's choice	
Books For Reference: 1. Alok Kumar Rai, Customer Relationship Management Concept & Cases, Prentice Hall of India Private Limited 2. S. Shanmugasundaram, Customer Relationship Management, Prentice Hall of India Private Limited 3. Kaushik Mukherjee, Customer Relationship Management, Prentice Hall of India Private Limited 4. Jagdish Seth, et al, Customer Relationship Management 5. V. Kumar & Werner J., Customer Relationship Management, Willey India 6. Francis Buttle, Stan Maklan, Customer Relationship Management: Concepts and Technologies, 3rd edition, Routledge Publishers, 2015 7. Kumar, V., Reinartz, Werner Customer Relationship Management Concept, Strategy and Tools, 1st edition, Springer Texts, 2014. 8. Jagdish N.Sheth, Atul Parvatiyar & G.Shainesh, "Customer Relationship Management", Emerging Concepts, Tools and Application", 2010, TMH 9. Dilip Soman & Sara N-Marandi," Managing Customer Value" 1st edition, 2014, Cambridge. 10. Alok Kumar Rai, "Customer Relationship Management: Concepts and Cases", 2008, PHI. 10. Ken Burnett, the Handbook of Key "Customer Relationship Management", 2010, Pearson Education. 11. Mukesh Chaturvedi, Abinav Chaturvedi, "Customer Relationship Management- An Indian Perspective", 2010 Excel Books, 2nd edition	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 4.5 **Name of the Course: INTRODUCTION TO R**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF TEACHING HOURS**
2 CREDITS	**3 HOURS**	**30 HOURS**
Pedagogy : Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Review of Journals and Books etc.		
Course Outcomes: On successful completion of the course, the Students will be able to: a. Understand the evolution and importance of R programming in Data Analytics. b. Differentiate between various data types and structures in R. c. Conduct basic Exploratory Data Analysis (EDA) with 'ggplot2'. d. Apply basic statistical techniques using R. a. Grasp fundamental machine learning concepts and algorithms.		
Syllabus:		**HOURS**
Unit.1: Introduction to R and Data Handling		**10**
Importance of Data Analytics in Business, Role and Capabilities of R Programming, RStudio Interface and Basic Commands, Data Types in R: Vectors, Lists, and Data Frames, Basic Operations: Arithmetic, Logical, Relational, Overview of Control Structures (if, for loops). (Lab Sessions)		
Unit 2: Data Manipulation and Exploratory Data Analysis		**10**
Basics of Data Importing (CSV, Excel), Data Cleaning Techniques (Handling Missing Values), Data Transformation Using dplyr, Exploratory Data Analysis (EDA) with ggplot2, Descriptive Statistics and Key Visualizations. (Lab Sessions)		
Unit 3: Statistical Analysis and Business Applications		**10**
Introduction to Hypothesis Testing and Confidence Intervals, Simple Linear Regression, Introduction to ANOVA and Non-Parametric Tests, Introduction to Machine Learning in Business, Overview of Simple Algorithms (K-Means Clustering, Decision Trees). (Lab Sessions)		

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Skill Development Activities:

1. Write the steps for RStudio installation (brief).
2. Write basic R codes for data frames and logical operations.
3. Write the steps in performing basic data cleaning using dplyr.
4. Explain simple linear regression and its steps in executing in R

Books for References:

1. R for Data Science by Hadley Wickham & Garrett Grolemund
2. The Art of R Programming by Norman Matloff
3. Machine Learning with R by Brett Lantz
4. Data Science for Business by Foster Provost & Tom Fawcett
5. Introduction to Statistical Learning by Gareth James et al.

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 5.1
Name of the Course: **INCOME TAX LAW & PRACTICE- I**

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Comprehend the procedure for computation of Total Income and tax liability of an individual.
b. Understand the provisions for determining the residential status of an Individual.
c. Comprehend the meaning of Salary, Perquisites, Profit in lieu of salary, allowances and various retirement benefits.
d. Compute the income house property for different categories of house property.
e. Comprehend TDS & advances tax Ruling and identify the various deductions under section 80.

Syllabus:	HOURS
Unit-1: Basic Concepts of Income Tax	**08**

Introduction –Meaning of tax-, types of taxes and cannons of taxation, Important definitions, assessment year, previous year including exceptions, assesses, person, income, casual income, Gross total income, Total income, Agricultural income, Tax Rates (Old and New Regimes). Exempted incomes of individuals under section 10.

Unit- 2: Assessment Procedure and Income Tax Authorities	**08**

Meaning of Assessment - Types of Assessment– Regular Assessment- Self Assessment – Best Judgement Assessment- Summary Assessment – Scrutiny Assessment – Income Escaping Assessment
- Permanent Account Number -Meaning, Procedure for obtaining PAN and transactions were quoting of PAN is compulsory. Income Tax Authorities their Powers and functions. CBDT, CIT and AO.

Unit-3: Residential Status and Incidence of Tax	**10**

Introduction – Residential status of an individual. Determination of residential status of an individual. Incidence of tax or Scope of Total income. Problems on computation of Gross total Income of an individual (Deductions U/S 80 excluded)

Unit- 4: Income from Salary	**18**
Introduction - Meaning of Salary -Basis of charge Definitions–Salary, allowances, Perquisites, and profits in lieu of salary - Provident Fund - Retirement Benefits – Gratuity, pension and Leave salary. Deductions U/S 16 and Problems on Computation of Taxable Salary.	
Unit- 5: Income from House Property	**12**
Introduction - Basis of charge - Deemed owners -House property incomes exempt from tax, Vacancy allowance and unrealized rent. Annual Value –Determination of Annual Value-Deductions U/S 24 from Net Annual Value - Problems on Computation of Income from House Property.	
Skill Development Activities: 1. Prepare slab rates chart for different Individual assesses (Old Regime). 2. List out any 6 Incomes exempt from tax under section 10 of an Individual. 3. Draw an organization chart of Income Tax Authorities. 4. Prepare the chart of perquisites received by an employee in an organization. 5. Prepare the chart of Computation of Income under House Property.	
Books for References: 1. Mehrotra H.C and T.S.Goyal, Direct taxes, Sahithya Bhavan Publication, Agra. 2. Vinod K. Singhania, Direct Taxes, Taxman Publication Private Ltd, New Delhi. 3. Gaur and Narang, Law and practice of Income Tax, Kalyani Publications, Ludhiana. 4. Bhagawathi Prasad, Direct Taxes.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 5.2
Name of the Course: MANAGEMENT ACCOUNTING

COURSECREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, Tutorials, and Problem Solving.

Course Outcomes: On successful completion of the course, the students will:

a. Explain the application of management accounting and various tool used
b. Make inter – firm and inter- period comparison of financial statements
c. Analyze financial statements using various ratios for business decisions.
d. Prepare fund flow and cash flow statements
e. Prepare different types of budgets for the business.

SYLLABUS:	HOURS
UNIT-1: Introduction to Management Accounting	**8**

Introduction- Meaning and Definition – Objectives – Nature and Scope–Functions- Role of Management Accountant, Relationship between Financial Accounting and Management Accounting, Relationship between Cost Accounting and Management Accounting, advantages and limitations of Management, Technique of Management Accounting (Concept Only).

UNIT-2: Ratio Analysis	**14**

Introduction- Meaning and Definition of ratio, Meaning of Accounting ratio, and Ratio Analysis – Uses and Limitations –Classification of ratios- Liquidity ratios, Profitability ratios and Solvency ratios. Problems on conversion of financial statements into ratios and ratios into financial statements

UNIT- 3: Cash Flow Analysis	**12**

Meaning and Definition of Cash Flow Statement – Concept of Cash and Cash Equivalents - Uses of Cash Flow Statement – Limitations of Cash Flow Statement– Provisions of Ind.AS-7. Procedure for preparation of Cash Flow Statement – Cash Flow from Operating Activities – Cash Flow from Investing Activities and Cash Flow from Financing Activities – Preparation of Cash Flow Statement according to Ind. AS-7.

BBA (Business Analytics)

UNIT-4: Marginal Costing	**10**
Introduction-Meaning and definition of marginal cost, marginal costing, features of marginal costing- terms used in marginal costing – P/V ratio, BEP, Margin of Safety, Angle of Incidence and Break-Even Chart. Break Even Analysis- assumption and uses problems.	
UNIT-5: Budgetary Control	**12**
Meaning and Definition of Budget and Budgetary Control, objectives of budgetary control, advantages and limitations of budgetary control, essentials of effective budgeting, Types of Budget-Functional budgets, Master Budget, Fixed and Flexible Budget, Problems on Flexible budget and Cash Budget.	
Skill Developments Activities: 1. Prepare with imaginary figures a Cash budget. 2. Prepare with imaginary figures comparative statement and analyze the financial position. 3. Prepare with imaginary figures a cash flow statement 4. Prepare a Trend analysis statement for three years with imaginary figures.	
Books for References: 1. Dr. S.N. Maheswari, Management Accounting, Mahavir Publications 2. T.S.Sexana, Advanced Cost and Management Accounting, Sultan Chand Jain and Narang, Cost and Management Accounting, Kalyani Publisher. 3. Dr. S.N. Goyal and Manmohan, Management Accounting, S.N. Publications. 4. B.S. Raman, Management Accounting, United Publishers. 5. Sharma and Gupta, Management Accounting, Kalyani Publishers. 6. M N Arora, Accounting for Management, Himalaya Publisher 7. Jawahar Lal, Cost Accounting; McGraw-Hill Education (India)	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 5.3
Name of the Course: INTRODUCTION TO PYTHON

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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

a. Understand Python Programming
b. Apply Control Structures and Functions in Business Decision-Making
c. Analyze Data Structures and Their Role in Business Analytics
d. Evaluate File Handling, Exception Handling, and Data Processing
e. Create Data Analytics Models for Commerce and Management

SYLLABUS:	HOURS
Unit 1: Introduction to Python and Google Colab for Business Applications	**10**

Overview of Python for Commerce & Management, Introduction to Google Colab: Features and Benefits, Writing & Running Python Code in Google Colab, Data Types & Type Conversion Relevant to Business (Integers, Floats, Strings), Operators and Expressions with Business Examples (Profit, Loss, ROI Calculation). **[Theory]**
[Lab Session] Navigating Google Colab (Cells, Markdown, Shortcuts), Writing and Executing Python Scripts in Colab, Business Calculations: Profit Margin, Interest Calculation, Discount Percentage.

Unit 2: Control Structures and Functions in Business Scenarios	**12**

Conditional Statements (if, elif, else) for Business Decision Making, Looping (for, while) in Data Processing, Functions: Creating User-defined Functions for Business Analytics, Lambda Functions & Built-in Functions for Quick Calculations, Scope and Lifetime of Variables. [**Theory]**

[Lab Session] Implementing Conditional Statements for Loan Approval Criteria, Writing Loops to Process Sales Data, Creating Functions for Business Calculations (EMI, Depreciation, Taxation)
Mini-Project: Retail Price Optimization using Functions

BBA (Business Analytics)

Unit 3: Data Structures and Business Data Processing	**12**
Lists: Storing & Manipulating Financial Transactions, Tuples: Immutable Business Records, Sets: Unique Customer & Product Data, Dictionaries: Key-Value Storage for Business Analytics, String Manipulation & Formatting in Business Reports **[Theory]** **[Lab Sessions]** Storing & Analyzing Sales Data in Lists, Using Dictionaries to Store Customer Information, Extracting Business Insights from String Data (Invoice Processing, Product Names) *Mini-Project: Creating an Inventory Management System*	
Unit 4: File Handling, Exception Handling, and Business Data Processing	**10**
Working with CSV Files: Reading & Writing Financial Data, Exception Handling (try-except-finally) for Robust Business Applications, Importing Built-in and User-defined Units, Google Colab Integration: Uploading and Processing Business Data **[Theory]** **[Lab Sessions]** Uploading & Reading Sales Data from CSV in Colab, Implementing Exception Handling for Business Applications, writing a Script to Process Payroll Data with File Handling. *Mini-Project: Automating Financial Report Generation*	
Unit 5: Introduction to Data Analytics using Python for Commerce	**12**
Introduction to Pandas: DataFrames for Business Analytics, Using NumPy for Financial Calculations, Data Visualization using Matplotlib & Seaborn, Handling Missing Data in Business Datasets (Dropping, Imputation Techniques), Detecting and Treating Outliers (IQR, Z-score, Winsorization), Introduction to AI/ML Applications in Finance & Marketing. [**Theory]** **[Lab Sessions]** Identifying and Treating Missing Data in Sales/Financial Datasets, Detecting and Handling Outliers in Customer Transaction Data, Analyzing Stock Market Data using Pandas, Processing E-commerce Sales Data using DataFrames, Creating Business Dashboards with Matplotlib *Mini-Project: Sales Forecasting using Historical Data*	
Skill Developments Activities: 1. Write a note on the role of operators in business calculations 2. Summarise the importance of structured data storage in financial analysis 3. Explain the uses of PYTHON in fraud detection and risk management. 4. Write a note on data visualization techniques and their role in decision-making.	
Reference Books: 1. Hayden Van Der Post, Data Science for Finance with Python: A Comprehensive Guide 2024, Reactive Publishing; 5th edition. 2. Dr Reema Thareja, Data Science and Machine Learning using Python, McGrawHill. 3. Luca Massaron, John Paul Mueller, Python for Data Science for Dummies 3rd Edition, 2023 4. Yves Hilpisch , Python for Finance: Mastering Data-Driven Finance, 3rd edition 5. Hemant Kumar Mehta, Manoj Kumar Solanki, Python for Business Analytics 6. Matt Taddy, Business Data Science: Combining Machine Learning and Economics to Optimize Automated Decisions	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 5.4
Name of the Course: MARKETING ANALYTICS

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS

Pedagogy: Classroom lectures, Case studies, Tutorial classes, Group discussions, Seminar Case Studies & fieldwork etc.,

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

a. Understand the fundamental concepts and applications of Marketing Analytics
b. Demonstrate proficiency in handling and analyzing marketing data using R Programming and BlueSky Statistics
c. Analyze customer behavior and market segmentation using clustering techniques
d. Evaluate the effectiveness of marketing campaigns using A/B Testing, Sentiment Analysis, and Marketing Mix Modeling
e. Develop data-driven marketing recommendations by applying machine learning Techniques

SYLLABUS:	HOURS
Unit 1: Introduction to Marketing Analytics & Data Handling	**10**

Role & Importance of Marketing Analytics, **Types of Marketing Analytics** – Descriptive, Diagnostic, Discovery, Predictive and Prescriptive.

Marketing Data Sources – CRM, Digital Platforms, Transactional Data.
Data Handling & Preprocessing: [Hands on] Using BlueSky Statistics for importing, cleaning, and basic transformations (GUI-based), Exploratory Data Analysis (EDA) using BlueSky Statistics (Summary Statistics, Visualizations).

Unit 2: Consumer Analytics & Market Segmentation	**12**

Customer Segmentation Methods – Demographic, Behavioural, Psychographic, RFM (Recency, Frequency, Monetary) Analysis for Customer Value Assessment, K-Means & Hierarchical Clustering for Segmentation (**Using R**), Churn Analysis Using Logistic Regression (Using BlueSky Statistics),
Lab Sessions: Customer Segmentation using K-Means & Hierarchical Clustering in R (cluster package) using Neural Networks and NLP; Churn Prediction using Logistic Regression in BlueSky Statistics

BBA (Business Analytics)

Unit 3: Digital & Social Media Analytics	**12**
Google Analytics & Social Media Metrics – Bounce Rate, Click-Through Rate, Conversion Rate. Text Analysis– Word Frequencies, Word Clouds, Keyword Extraction. Introduction to Sentiment Analysis Using Prebuilt Libraries in R (syuzhet package) – Understanding Positive, Negative, and Neutral Sentiments A/B Testing for Marketing Campaigns (Using BlueSky Statistics), Customer Lifetime Value (CLV) Prediction (Using R's caret package). **Lab Sessions**: Generating Word Clouds & Basic Text Analytics in BlueSky Statistics Sentiment Analysis Using syuzhet in R. A/B Testing using BlueSky Statistics for campaign performance evaluation.	
Unit 4: Marketing Mix Modeling & Pricing Analytics	**10**
Marketing Mix Elements & Demand Forecasting, Price Sensitivity & Elasticity Analysis (Using BlueSky Statistics), Regression-Based Marketing Mix Modeling (Using R), Promotion Effectiveness & Time Series Forecasting (Using R's forecast package). **Lab Sessions:** Time Series Forecasting using forecast package in R. Price Elasticity Analysis using BlueSky Statistics	
Unit 5: AI & Machine Learning in Marketing	**12**
AI in Marketing – Chatbots, Personalization, Customer Insights, Recommender Systems & Personalized Marketing (Using R's *recommenderlab* package), Market Basket Analysis & Association Rules (Using BlueSky Statistics), Predicting Customer Purchase Behaviour (Using R's caret package); Application of ML in Marketing Strategies. Lab Sessions: Recommender Systems using *recommenderlab* in R. Market Basket Analysis using Association Rule Mining in BlueSky Statistics.	
Skill Development Activities: 1. Write a detailed note on how analytics help businesses make data-driven marketing decisions, with real-world examples. 2. Explain association rules and product bundling strategies used by retailers. 3. Compare Regression-Based Marketing Mix Modeling with Time Series Forecasting 4. Illustrate the Concept of Customer Segmentation	

BBA (Business Analytics)

Books for References:

1. Joseph Hair, Dana E. Harrison, and Haya Ajjan, Essentials of Marketing Analytics, McGraw Hill 2024
2. Gina L. Cook, Digital Analytics for Marketing (Mastering Business Analytics), Routledge 2020
3. Bonnie G. Buchanan and George J. Kembel, Marketing Analytics: A Comprehensive Guide v1.0, FlatWorld 2020
4. Seema Gupta and Avadhoot Jathar, Marketing Analytics, Wiley India 2023
5. Robert A, BlueSky Statistics 10 User Guide, Muenchen *Publisher:* Lulu Press *Edition:*
6. First Edition (2021)
7. Chris Chapman and Elea McDonnell, R for Marketing Research and Analytics, Feit

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics) **Course Code:** BBA (Business Analytics) 5.5 **Name of the Course: BUSINESS LAWS**		
COURSE CREDITS	**NO. OF HOURS PER WEEK**	**TOTAL NO. OF 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: a. Comprehend the laws relating to Contracts and its application in business activities. b. Comprehend the rules for Sale of Goods and rights and duties of a buyer and a seller. c. Understand the significance of Consumer Protection Act and its features d. Understand the need for Environment Protection.		
Syllabus:		**HOURS**
Unit-1: Essentials of Valid Contracts-1		**12**
Introduction – Definition of Contract, Essentials of Valid Contract; **Offer and acceptance-** Offer and Acceptance and their various types, Intention to create legal relationship, Communication of Offer and Acceptance, Revocation and mode of revocation of offer and acceptance **Consideration**- Meaning and nature of Consideration, Exceptions to the rule- No Consideration-No Contract, Adequacy of consideration, Present and past consideration, Unlawful consideration and its effects **Contractual capacity**-Meaning of Capacity to Contract, Incapacity to contract- Minors, Persons of Unsound Mind, Disqualified agreements, Effects of Minors Agreement.		
Unit-2: Essentials of Valid Contracts -2		**12**
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: Indian Sale of Goods Act		**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 an Unpaid Seller		

BBA (Business Analytics)

Unit-.4: Consumer Protection & Cyber Laws	**12**
Consumer Protection Laws- Definitions of the terms – Consumer, Consumer Protection, Consumer Dispute, Defect, Deficiency, Unfair Trade Practices, Rights of Consumer under the Act, Consumer Redressal- Meaning and Agencies – District Commission, State Commission and National Commission, Discussion of Leading Cases. **Cyber Laws-** Introduction to Information Technology Act 2000, (Amended 2018)- Features, Important Concepts- Private Key, Public Key, Digital Signature, Digital Signature Certificate; Cyber Crimes- Offences and Penalties for E-Frauds and Illegitimate Digital Arrest.	
Unit-5: Environmental Protection Laws	**08**
Introduction - Objectives of the Act, Definitions of Important Terms – Environment, Environment Pollutant, Environment Pollution, Hazardous Substance and Occupier, Types of Pollution, Powers of Central Government to protect Environment in India.	
Skill Developments Activities: 1. Write the facts and adjudication of the case of "Carlill vs Carbolic Smoke Ball Company" 2. State the different types of Corporate Crimes under Sec 66(A) of Information Technology Act 2000. 3. List out any five rights of a consumer under Consumer Protection Laws. 4. List at least 5 items which can be categorized as 'hazardous substance' according to Environment Protection Act.	
Books for Reference: 1. M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi. 2. N.D. Kapoor, Business Laws, Sultan Chand Publications 3. Avtar Singh, Business Law, Eastern Book Company, Lucknow. 4. SN Maheshwari and SK Maheshwari, Business Law, National Publishing House, New Delhi. 5. Aggarwal S K, Business Law, Galgotia Publishers Company, New Delhi 6. Bhushan Kumar Goyal and Jain Kinneri, Business Laws, International Book House 7. P C Tulsian and Bharat Tulsian, Business Law, McGraw Hill Education 8. Sharma,J.P. and Sunaina Kanojia, Business Laws, Ane Books Pvt. Ltd., New Delhi 9. Chanda.P.R, Business Laws, Galgotia Publishing Company	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 6.1
Name of the Course: INCOME TAX LAW & PRACTICE -II

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. Of 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:

a. Understand the procedure for computation of income from business and other Profession.
b. Ability to compute capital gains.
c. Compute the income from other sources.
d. Demonstrate the computation of total income of an Individual.
e. Comprehend the assessment procedure and to know the power of income tax authorities.

SYLLABUS:	HOURS
Unit-1: : Profits and Gains of Business and Profession	**18**

Introduction-Meaning and definition of Business, Profession and Vocation. - Expenses Expressly allowed - Expenses Expressly Disallowed - Allowable losses - Expressly disallowed expenses and losses, Expenses allowed on payment basis. Problems on computation of income from business of a sole trading concern - Problems on computation of income from profession: Medical Practitioner - Advocate and Chartered Accountants.

Unit-2: Capital Gains	**10**

Introduction - Basis for charge - Capital Assets - Types of capital assets – Transfer - Computation of capital gains – Short term capital gain and Long term capital gain - Exemptions under section 54, 54B, 54EC, 54D and 54F. Problems covering the above sections.

Unit-3: Income from other Sources	**10**

Introduction - Incomes taxable under Head income other sources – Securities - Types of Securities - Rules for Grossing up. Ex-interest and cum-interest securities. Bond Washing Transactions - Computation of Income from other Sources.

Unit-4: Set Off and Carry Forward of Losses & Assessment of Individuals.	**10**

Introduction – Provisions of Set off and Carry Forward of Losses (Theory only) Deductions under Sections 80C, 80CCC, 80CCD, 80D, 80DD, 80DDB, 80E, 80EE, 80EA, 80G, 80GG, 80QQB, 80RRB, 80TTA, 80 TTB and 80U as applicable to Individuals.

BBA (Business Analytics)

Unit-5: Total Income and Tax Liability	**8**
Computation of Total Income and tax liability of an Individual Assesse. (Problems)	
Skill Development Activities: 1. Mention the procedure involved in the computation of income from profession. 2. List out the different types of capital assets and identify the procedure involved in the computation of tax for the same. 3. List out the steps involved in the computation of income tax from other sources and critically examine the same. 4. List any six deductions available under section 80. 5. Prepare a format for the computation of taxable income and tax liability of an individual assesse	
Books for References: 1. Mehrotra H.C and T.S.Goyal, Direct taxes, Sahithya Bhavan Publication,Agra. 2. Vinod K. Singhania, Direct Taxes, Taxman Publication Private Ltd, New Delhi 3. Gaur and Narang, Law and practice of Income Tax, Kalyani Publication, Ludhiana. 4. Bhagawathi Prasad, Direct Taxes.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) **6.2**
Name of the Course: INTERNATIONAL BUSINESS

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Understand the concept of International Business.
b. Differentiate the Internal and External International Business Environment.
c. Understand the difference between MNC and TNC
d. Understand the role of International Organisations in International Business.
e. Understand International Operations Management.

SYLLABUS:	HOURS
Unit-1: Introduction to International Business	**12**

Introduction- Meaning and definition of international business, need and importance of international business, stages of internationalization, tariffs and non-tariff barriers to international business. Mode of entry into International Business

Unit-2: International Business Environment	**12**

Overview of IBE, Internal and External environment - Economic environment, Political environment, Demographic environment, Social and Cultural environment, Technological and Natural environment.

Unit-3: Globalization	**12**

Meaning, features, Approaches to Globalization, Essential conditions favouring globalization, challenges to globalization; MNCs & TNCs - Meaning, features, merits and demerits; Technology transfer - Meaning and Issues in Technology Transfer; Emerging Trends in Globalization impacting Organizations.

Unit-4: Organizations Supporting International Business	**10**

Meaning, Objectives and functions of - IMF, WTO, GATT, GATS, TRIM, TRIP; and Regional Integration- EU, NAFTA, SAARC, BRICS.

Unit-5: International Operations & Supply Chain Management	**10**
Global Supply Chain Management- Global sourcing, Global manufacturing strategies, International Logistics, International HRM - Staffing policy and it's determinants; Expatriation and Repatriation- Meaning, Objectives, Procedures and Challenges.	
Skill Development Activities: 1. List any 10 countries and their currencies. 2. Prepare a chart showing the modes of entry into global business. 3. List any 10 Indian MNCs along with their products or services offered. 4. Draft an organization structure of IMF/WTO/World Bank	
Books for References: 1. Rakesh Mohan Joshi. (2011). International Business, Oxford University Press, NewDelhi 2. Francis Cherunilam; International Business, Prentice Hall of India 3. P. SubbaRao – International Business – HPH 4. Sumati Varma. (2013). International Business (1st edi), Pearson. 5. Charles Hill. (2011). International Business: Text & Cases, Tata McGraw Hill, NewDelhi. 6. International Business by Daniel and Radebaugh –Pearson Education.	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) **6.3**
Name of the Course: STRATEGIC MANAGEMENT

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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:

a. Explain the fundamental concepts of strategic management, including strategic decision-making and business ethics.
b. Analyze the external business environment using environmental scanning techniques, SWOT analysis, and value chain analysis to assess competitive advantages.
c. Evaluate different strategic planning approaches, including stability, expansion, merger, and retrenchment strategies, considering economic conditions.
d. Develop strategic implementation frameworks, considering leadership, corporate culture, and functional strategies in financial, marketing, and operational domains.
e. Assess the effectiveness of strategic decisions using key performance indicators, management control mechanisms, and strategy evaluation techniques.

SYLLABUS:	HOURS
Unit-1: Introduction to Strategic Management	**08**

Introduction to Strategic Management. - Meaning and Definition – Need – Process of Strategic Management –Levels of Strategy- Corporate, Business and Functional; Strategic Decision Making

Unit-2: Strategic Analysis	**12**

The concept of Environment – The Company and its Environment – **External Analysis-** Scanning the Environment- PESTLE-Political, Economic, Social, Technological, Legal and Environmental Analysis; Industry Analysis, Competitive Analysis- Porter's Five Forces Model
Internal Analysis- SWOT Analysis, 7S McKinsey Model, Value Chain Analysis, Resource Based View.

Unit-3: Strategic Planning	**12**

Strategic Planning Process – Strategic Plans during recession, recovery, boom and depression – Stability Strategy – Expansion Strategy – Merger Strategy – Retrenchment Strategy – Restructure Strategy – Levels of Strategy – Corporate Level Strategy – Business Level Strategy (SBUs) and Functional Level Strategy –

Unit-4: Implementation of Strategy	**14**
Aspects of Strategy Implementation – Project Implementation – Procedural Implementation – Structural Implementation – Structural Considerations –Organizational Design and Change, Corporate Restructuring – Organizational Systems. Behavioral Implementation – Leadership Implementation – Corporate Culture – Corporate Policies and Use of Power. Functional and Operational Implementation – Functional Strategies – Functional Plans and Policies. Financial – Marketing – Operational and Personnel dimensions of Functional Plan and Policies – Integration of Functional Plans and Policies.	
Unit-5: Strategy Evaluation	**10**
Strategy Evaluation and Control - Operational Control - Overview of Management Control – Focus on Key Result Areas; Balanced Score Card, Key Performance Indicators, Risk Management and Contingency Planning. Emerging Trends in Strategic Management- Digital Transformation and AI in Strategy, Agile and Adoptive Strategies, Sustainability and Corporate Social Responsibility, United Nations Sustainable Developmental Goals.	
Skill Development Activities: 1. Present a chart showing Strategic Management Process. 2. Present the SWOC Analysis of a Manufacturing Organization. 3. Analyse the corporate, business and functional level strategies of any one Indian Company. 4. Select any sector and make competitive analysis using Porter's five forces model.	
Books for References: 1. Dr. Aswathappa, Business Environment for Strategic Management, Tata McGraw Hill. 2. Subbarao: Business Policy and Strategic Management, HPH. 3. Charles W.L Hill and Gareth R. Jones, Strategic Management an Integrated Approach, Cengage & Learning 4. Azhar Kazmi, Business Policy and Strategic Management, Tata McGraw Hill 5. AppaRao; Strategic Management and Business Policy, Excel Books. 6. Ghosh P.K., Business Policy and Strategic Planning and Management, Tata McGraw Hill. 7. Pillai, Strategic Management, 8. Lawerence, Business Policy and Strategic Management, Tata McGraw Hill. 9. Sathyashekar : Business Policy and Strategic Management, I.K International Publishing House Pvt.Ltd	

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 6.4
Name of the Course: FINANCIAL ANALYTICS

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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

a. Understand the market forces for global supply chains
b. Comprehend the strategies adopted to manage risks in supply chains.
c. Gain knowledge on the global Supply chain performance
d. Understand the significance of green supply chains.

SYLLABUS:	HOURS
Unit 1: Introduction to Financial Analytics and Data Sources	**10**

Overview of Financial Analytics: Importance & Applications, Financial Data Sources in India: **RBI, NSE, BSE, SEBI, MOSPI**, Introduction to Python Libraries for Finance: Pandas, NumPy, yFinance, NSEpy, Extracting Financial Data from **NSE, BSE, RBI, and SEBI**

Lab Sessions

Fetching **Indian Stock Market** Data using yfinance & NSEpy
Extracting **Inflation & GDP Data** from RBI & MOSPI (CSV processing) Loading & Processing **Banking & Forex Data** from RBI

Unit 2: Financial Data Processing & Visualization	**12**

Data Cleaning Techniques for Financial Data, Handling Missing Data & Outliers in Financial Datasets, Key Financial Metrics: **ROI, ROE, EPS, P/E Ratio, Market Capitalization**, Financial Data Visualization: **Candlestick Charts, Moving Averages, Bollinger Bands.**

Lab Sessions

Handling Missing Data in **Stock Market Time Series** Identifying & Treating Outliers in **Indian Market Returns** Creating **Financial Dashboards** using Matplotlib & Seaborn

Mini-Project: Stock Market Trend Analysis (NSE/BSE)

Unit 3: Time Series Analysis for Financial Forecasting	**12**

Basics of Time Series Analysis in Finance, ARIMA, SARIMA, and Exponential Smoothing Models, Volatility Modeling: GARCH Model, Introduction to Machine Learning for Financial Forecasting

BBA (Business Analytics)

Lab Sessions

Implementing **Moving Average & Exponential Smoothing** ARIMA & SARIMA Forecasting on **Indian Stock Market Data Volatility Prediction** using the **GARCH Model**

Mini-Project: Forecasting Gold & Crude Oil Prices using Indian Market Data

Unit 4: Risk Analysis and Portfolio Optimization	**10**

Introduction to Risk & Return Metrics, **Value at Risk (VaR) & Conditional VaR for Indian Stocks**, Monte Carlo Simulation for **Portfolio Risk Analysis**, Modern Portfolio Theory: **Efficient Frontier & CAPM**

Lab Sessions

Calculating **VaR & CVaR for NSE Stocks**

Monte Carlo Simulation for **Risk Estimation**

Portfolio Optimization using Python (Markowitz Model)

Mini-Project: Constructing an Optimal Investment Portfolio (Indian Market)

Unit 5: Predictive Analytics in Finance	**12**

Credit Scoring & Risk Assessment using Logistic Regression, **Fraud Detection in Banking** using Machine Learning, **Sentiment Analysis on Indian Financial News**, **Algorithmic Trading Strategies** using Python.

Lab Sessions

Predicting **Loan Default Risk** using Logistic Regression Implementing **Fraud Detection in Banking Transactions** Sentiment Analysis of **Indian Stock Market News & Tweets Backtesting Trading Strategies on NSE Stocks**

Mini-Project: Developing a Credit Risk Prediction Model

Skill Development Activities:

1. Evaluate major financial data sources in India (RBI, NSE, BSE, SEBI, MOSPI) and their importance in financial analysis.
2. Assess the significance of Value at Risk (VaR) and Conditional VaR (CVaR) in financial risk analysis.
3. Investigate the role of Machine Learning in finance for credit scoring, fraud detection, and algorithmic trading.
4. Compare ARIMA, SARIMA, and GARCH models for financial forecasting and
5. assess their practical applications.

BBA (Business Analytics)

Books for References:

1. Yves Hilpisch, *Python for Finance: Mastering Data-Driven Finance* (3rd Edition), O'Reilly Media, 2022.
2. Yves Hilpisch, *AI in Finance*, O'Reilly Media, 2020.
3. Marcos López de Prado, *Advances in Financial Machine Learning*, Wiley, 2018.
4. Matt Taddy, *Business Data Science: Combining Machine Learning and Economics*, McGraw Hill, 2019.
5. RBI, NSE, SEBI reports – Official reports from the Reserve Bank of India (RBI), National Stock Exchange (NSE), and Securities and Exchange Board of India (SEBI) for real-world Indian financial data.

Essential reading:

Manoj Kumar Jena , Srikant Das , Brajaballav Kar , Sentiment Analysis of Chairperson's Message and Its Influence on Financial Performance: Study on NIFTY 50 Companies, Indian Journal of Finance, DOI: 10.17010/ijf/2024/v18i11/174639

BBA (Business Analytics)

Name of the Program: Bachelor of Business Administration (Business Analytics)
Course Code: BBA (Business Analytics) 6.5
Name of the Course: HR ANALYTICS

COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF 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

a. Understand the Fundamentals of HR Analytics
b. Apply Data Collection and Preprocessing Techniques
c. Implement Descriptive and Predictive HR Analytics
d. Analyze Performance and Compensation Data
e. Interpret Emerging Trends in HR Analytics

SYLLABUS:	HOURS
Unit No. 1: Introduction to HR Analytics	**10**

Concept & Evolution of HR Analytics, Role of HR Analytics in Decision Making, HR Metrics & KPIs: Employee Turnover, Retention, Productivity, Compensation Metrics, Data Sources in HR Analytics: Surveys, HRIS, Payroll, Performance Management Systems, Ethical and Legal Considerations in HR Analytics.

Lab Session: Introduction to **Python** for HR Analytics (Google Colab, Pandas basics)

Unit No. 2: Data Collection & Preprocessing in HR Analytics	**12**

Data Collection Techniques: Internal vs. External Data, Data Cleaning & Preprocessing: Handling Missing Data, Outliers, Data Transformation, Exploratory Data Analysis (EDA) in HR

Lab Session:

Importing HR datasets using **Pandas**

Data Cleaning using **NumPy, PowerBi & Pandas**

Visualizing HR Data using **Seaborn & Matplotlib**

Unit No. 3: Descriptive & Predictive HR Analytics	**12**

Descriptive Analytics in HR: Employee Performance, Absenteeism, Salary Trends, Predictive Analytics for HR Decision Making: Attrition Prediction; Performance Forecasting; Recruitment Analytics, Regression & Classification Models in HR Analytics

Lab Session:

Building Predictive Models using **Scikit-Learn (Logistic Regression, Decision Trees)**

Case Study: Employee Attrition Prediction.

BBA (Business Analytics)

Unit No. 4: Workforce Planning & Sentiment Analysis	**10**
Workforce Planning and Talent Acquisition Analytics, Diversity & Inclusion Analytics, Employee Sentiment Analysis using Text Mining **Lab Session:** Sentiment Analysis on Employee Reviews using **NLTK & VADER** Workforce Planning using **Time Series Forecasting (Statsmodels)**	
Unit 5: Performance & Compensation Analytics	**12**
Performance Management Analytics: Measuring Productivity & Effectiveness, Compensation Analytics: Pay Equity & Market Benchmarking, HR Dashboards & Visualization: Reporting Key HR Metrics, Future Trends in HR Analytics. **Lab Session:** Creating HR Dashboards using **Streamlit** Case Study: Pay Equity Analysis.	

Skill Development Activities:

1. List out the role of HR Analytics in strategic decision-making. Provide examples of how organizations benefit from HR Analytics.
2. Demonstrate Exploratory Data Analysis (EDA) in the context of HR Analytics. How does it help in understanding employee behaviour?
3. List the uses of predictive analytics to improve employee performance management in organizations.
4. Write a note on importance of Sentiment Analysis in HR practices

Books for References:

1. Keith McNulty, Handbook of Regression Modelling in People Analytics: With Examples in R, Python and Julia, Chapman & Hall/CRC 2021.
2. Dr. Bharti Motwani, HR Analytics: Practical Approach Using Python, Wiley India 2021
3. Dipak Kumar Bhattacharyya, HR Analytics: Understanding Theories and Applications, SAGE Publications India Pvt Ltd 1st edition.
4. Marielle Smith, Shonna Waters, Patrick McCarthy, & David A. Smith, The Practical Guide to HR Analytics: Using Data to Inform, Transform, and Empower HR Decisions, Society for Human Resource Management (SHRM) 1st edition.
5. Martin Edwards & Kirsten Edwards, Predictive HR Analytics: Mastering the HR Metric, Kogan Page, 2nd edition.