



BENGALURU CITY UNIVERSITY

CHOICE BASED CREDIT SYSTEM

(as per SEP 2024)

Syllabus for I & II Semester B.Com (Business Data Analytics)

2024-25

B.Com (BDA)

Proceedings of BOS Meeting

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

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

MEMBERS PRESENT:

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

Co-Opted Members Present

9	Prof.Ritika Sinha	Chairperson, Department of Management, Bengaluru City University	Member
10	Prof.G.Venugopal	Principal VVN Degree College, Bengaluru	Member

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


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

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BENGALURU CITY UNIVERSITY
REGULATIONS PERTAINING TO B.COM (BUSINESS DATA
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 B.Com - Business Data Analytics Program, offered by Bengaluru City University affiliated colleges, Constituent Colleges and Department of Commerce, Bengaluru City University.

Therefore, this regulation will be applicable to all students seeking admission for B.COM - Business Data Analytics Regular Programme from the academic year 2024-25.

The Board of Studies resolved to provide the regulation for B.Com (Business Data 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:

- a) To create manpower for global middle level management equipped with core managerial competencies and relevant IT skills.
- b) To cater to the requirements of Industries.
- c) To prepare students to take up Higher Education to become business scientists, researchers, consultants and teachers, with core competencies.
- d) To develop Ethical Managers with Inter-Disciplinary and Holistic approach.
- e) To prepare students to pursue careers in Financial Data Analytics, Marketing Analytics, Human Resource Analytics, Data Science and allied functions in the Corporate Sector.
- f) To develop students for competitive examinations of UPSC, KPSC, Staff Selection Commission, Recruitment of Banking, Insurance companies etc.
- g) To develop entrepreneurs.
- h) To equip students with the knowledge of various types of software and programs for Business data Analytics
- i) To enable students to apply the knowledge gained in data analytics for business decisions
- j)

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

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also eligible to apply for this programme. Students who have completed Diploma in Commercial Practice are eligible for lateral entry into 3rd Semester B.Com.

4. DURATION OF THE PROGRAMME:

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

5. MEDIUM OF INSTRUCTION

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

6. CLASSROOM STRENGTH OF STUDENTS

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

7. ATTENDANCE:

- a. For the purpose of calculating attendance, each semester shall be taken as a Unit.
 - b. A student shall be considered to have satisfied the requirement of attendance for the semester, if he / she has attended not less than 75% in aggregate of the number of working periods in each of the courses compulsorily.
- A student who fails to complete the course in the manner stated above shall not be permitted to take the University examination.

8. COURSE MATRIX

(i) Annexure-1 for B.COM- BUSINESS DATA ANALYTICS

9. TEACHING AND EVALUATION:

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

10. SCHEME OF EXAMINATION:

- a. There shall be a University examination at the end of each semester. The maximum marks for the university examination in each course/paper shall be 80.
- b. Of the 20 marks allotted for Internal Assessment, 10 marks shall be based on average of two tests (20 Marks each). Each test shall be of at least 01 hour duration to be held during the

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semester. The remaining 10 marks of the Internal Assessment shall be based on Attendance and Assignments /skill development exercises of 05 marks each.

c. The marks based on attendance shall be awarded as given below:

- 76% to 80% = 02 marks
- 81% to 85% = 03 marks
- 86% to 90% = 04 marks.
- 91% to 100% = 05 marks.

11. PATTERN OF QUESTION PAPER:

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

The Question Paper will be as per the following Model:

Section A	Conceptual questions (5 questions out of 8)	5 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	1 x 5 = 05
Total		80 marks

12. APPEARANCE FOR THE EXAMINATION:

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

13. MINIMUM FOR A PASS:

- (a) No candidate shall be declared to have passed the Semester Examination as the case may be under each course /paper unless he/she obtains not less than 35% (i.e. 28 marks out of 80) marks in written examination / practical examination and 40% marks in aggregate of written/ practical examination and internal assessment put together. However, there is no minimum

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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 regular examination, as prescribed for completing the programme. He/she must obtain the minimum marks for a pass in that subject (theory and practicals, separately) as stated above.

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

14. CLASSIFICATION OF SUCCESSFUL CANDIDATES:

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

15. PROVISION FOR IMPROVEMENT OF RESULTS:

The candidate shall be permitted to improve the results of the whole examination or of any Semester or a specific course within the prescribed time by the university after the publication of the results. This provision shall be exercised only once during the course and the provision

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once exercised shall not be revoked. The application for improvement of results shall be submitted to the Registrar (Evaluation) along with the prescribed fee.

16. FINAL RESULT / GRADES DESCRIPTION

An alpha-sign grade, the eight-point grading system, as described below shall be adopted for classification of successful candidate. The declaration of result is based on the Semester Grade Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned towards the completion of all the six semesters of the programme and the corresponding overall alpha-sign grades.

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

1. 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.

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$$CGPA = \sum (C_i \times G_i) / \sum C_i$$

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

$$CGPA = \sum (C_i \times S_i) / \sum C_i$$

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

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

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

18. TERMS AND CONDITIONS:

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

19. MEDALS AND PRIZES:

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

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

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

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ANNEXURE-1

COURSE MATRIX

I Semester

	Courses	Paper Code	Instruction hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1- Language	Language-1 - 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	Financial Accounting	1.1	4	3	20	80	100	4
	Principles of Marketing	1.2	4	3	20	80	100	4
	Business Environment	1.3	4	3	20	80	100	4
	Spreadsheet Analytics	1.4	4	3	20	80	100	4
Part 3- CC	Constitutional Values-1		3	1.5	10	40	50	2
	Total				130	520	650	24

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

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COURSE MATRIX

II Semester

	Courses	Paper Code	Instruction hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1- Language	Language-1 - 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	Advanced Financial Accounting	2.1	4	3	20	80	100	4
	Human Resource Management	2.2	4	3	20	80	100	4
	Business Regulations	2.3	4	3	20	80	100	4
	DBMS & SQL	2.4	4	3	20	80	100	4
Part 3- CC	Constitutional Values-2		3	1.5	10	40	50	2
	Value-Added Certificate Course *				25	-	25	1*
Total					155	520	675	25

* Follow the note given in the first semester Course Matrix.

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COURSE MATRIX

III Semester

	Courses	Paper Code	Instruction hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1- Language	Language-1 - 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	Corporate Accounting	3.1	4	3	20	80	100	4
	Quantitative Analysis for Business Decisions –I	3.2	4	3	20	80	100	4
	Cost Accounting	3.3	4	3	20	80	100	4
	C Programming	3.4	4	3	20	80	100	4
Part 3- SEC	Data Analysis using Tableau	3.5	2	1.5	10	40	50	2
	Total				130	520	650	24

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

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COURSE MATRIX

IV Semester

	Courses	Paper Code	Instruction hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1- Language	Language-1 - 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	Financial Management	4.1	4	3	20	80	100	4
	Quantitative Analysis for Business Decisions –II	4.2	4	3	20	80	100	4
	Costing Methods	4.3	4	3	20	80	100	4
	Business Data Analytics	4.4	4	3	20	80	100	4
Part 3- SEC	Introduction to R	4.5	2	1.5	10	40	50	2
	Value-Added Certificate Course *	4.6	-	-	25	-	25	1*
Total					155	520	675	25

* Follow the note given in the third semester Course Matrix.

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COURSE MATRIX

V Semester

	Courses	Paper Code	Instruction on hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1-DSC	Introduction to Python	5.1	4	3	20	80	100	4
	Marketing Analytics	5.2	4	3	20	80	100	4
	Income Tax- I	5.3	4	3	20	80	100	4
	Goods and Services Tax	5.4	4	3	20	80	100	4
Part 2-CC	Research Methodology	5.5	4	3	20	80	100	4
	Survey Project	5.6	2*	-	100**		100	4
Total					200	400	600	24

INSTRUCTIONS: 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 (using data analytics) in a Small, Medium and large organisation.

*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

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COURSE MATRIX

VI Semester

	Courses	Paper Code	Instruction on hrs/week	Duration of Exam (Hrs.)	Marks			Credits
					IA	Univ. Exam	Total	
Part 1-DSC	Financial Analytics	6.1	4	3	20	80	100	4
	Management Accounting	6.2	4	3	20	80	100	4
	Income Tax- II	6.3	4	3	20	80	100	4
	HR Analytics	6.4	4	3	20	80	100	4
	Auditing	6.5	4	3	20	80	100	4
Part 2-CC	Internship		2*	-	100**		100	4
Total					130	420	550	24

INSTRUCTIONS: During the VI Semester, students should 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 organisation, to enable them to apply the knowledge gained in data analytics.

* **A Maximum 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 Organisational 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 Organisation 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 along 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

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Syllabus - Semester I

Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code. 1.1 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 theoretical frame work of accounting as well as Accounting standards. b. Prepare Financial Statements from Incomplete records. c. Work out the accounting treatments for Consignment transactions. d. Learn various methods of Accounting for Hire Purchase transactions. e. Work out various Accounting treatments for Dependent Branches.		
SYLLABUS:		Hours
Unit - 1: Theoretical Framework of Accounting		08
Introduction-Meaning, Scope, Objectives, Importance and Functions of Accounting; Terminologies used in Accounting; Users of Accounting Information; Accounting Process; Cash basis and Accrual basis of Accounting; Branches of Accounting, Principles of Accounting, Concepts and Conventions; Accounting Standards-Indian Accounting Standards (Ind AS)-Meaning and Definition, Need and Objectives; Accounting Equations, Problems on Accounting Equations.		
Unit - 2: Conversion of Single Entry System to Double Entry System		12
Accounts from Incomplete Records/Single Entry System -Meaning, Features, Merits & Demerits; Conversion into Double Entry System, Need for Conversion; Preparation of Statement of Affairs, Cashbook, Memorandum Trading Account, Total Debtors Account, Total Creditors Account, Bills Receivable Account, Bills Payable Account & Trading and Profit & Loss and Balance Sheet- Problems		
Unit - 3: Consignment Accounts		12
Introduction-Meaning of Consignor, Consignee, Account Sales & Proforma Invoice; Goods Invoiced at Cost Price, Goods Invoiced at Selling Price, Accounting for Normal & Abnormal Loss; Valuation of Stock; Passing of Journal Entries & Preparation of Ledger Accounts in the books of Consignor only- Problems		
Unit - 4: Hire Purchase System		12
Meaning of Hire Purchase and Installment Purchase System, Difference between Hire Purchase and Installment Purchase, Important Definitions-Hire Purchase Agreement, Hire Purchase Price, Cash Price, Hire Purchase Charges; Calculation of Interest, Calculation of Cash Price; Journal Entries and Ledger Accounts in the books of Hire Purchaser only. (Asset Accrual Method only)- Problems		

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Unit - 5: Branch Accounts	12
Meaning, Objectives and Advantages of Branch Accounting; Types of Branches- Meaning and Features of Dependent Branches, Independent Branches and Foreign Branches; Methods of maintaining Books of Accounts by the Head Office–Debtors System only when the goods are sent at Cost Price and Invoice Price &ascertainment of Profit or Loss of Branch under Debtors System – Problems	
Skill Development Activities: <ol style="list-style-type: none"> 1. Enlisting any Five Indian Accounting Standards 2. Prepare a Memorandum Trading Account, Total Debtors Account, Total Creditors & Statement of Affairs with imaginary figures. 3. Preparation of Pro-form Invoice and Accounts sales with imaginary figures. 4. Prepare the Hire Purchase table with imaginary figures. 5. Prepare Branch Account with imaginary figures. 	
Books for Reference: <ol style="list-style-type: none"> 1. Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, McGraw-Hill Education, 13th Edition. 2. S. Anil Kumar, V. Rajesh Kumar and B. Mariyappa – Financial Accounting, Himalaya Publishing House, New Delhi. 3. SP.Iyengar (2005), Advanced Accounting, Sultan Chand & Sons, Vol.1. 4. Charles T. Horn gren and Donna Phil brick, (2013) Introduction to Financial Accounting, Pearson Education, 11th Edition. 5. J.R.Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi, 2nd Edition. 6. S.N.Maheshwari, and S.K.Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6th Edition. 	

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Advertising – Meaning and Objectives, Characteristics of an effective Advertisement, Types of Advertisement.

Personal Selling- Meaning and Importance, Characteristics of a Successful Salesperson.

Sales Promotion- Meaning, Objectives, Promotional Schemes, Limitations of Promotional Schemes.

Skill Development Activities:

1. Design a Marketing Mix for an imaginary product.
2. Design a logo and tagline for an imaginary product.
3. Develop an advertisement copy for a product.
4. Prepare a chart showing distribution network 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.
8. PN Reddy and Appanniah, Marketing Management
9. Saxena Rajan, (2017) Marketing Management, Tata McGraw - Hill Publishing Company Ltd., New Delhi. Fifth Edition.

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code:1.3 Name of the Course: BUSINESS ENVIRONMENT		
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, students will be able to: a) Understand the components of Business Environment. b) Analyse the various environmental factors influencing business organisation. c) Design a competitive analysis for a specific Industry. d) Understand the concept of Globalization and its impact on Domestic Businesses.		
SYLLABUS:		HOURS
Unit- 1: Introduction to Business Environment		12
Business Environment -Meaning, Types of Business Environment – Internal and External, Micro-Environment and Macro- Environment of business; Competitive analysis of Business; Environmental analysis-Scanning, Monitoring, Forecasting, Assessment; Limitation of Environment Analysis.		
Unit- 2: Political and Legal Environment		10
Political Environment - Functions of the State, Role of Government, State intervention in business- Reasons for and Types of state intervention in business. Legal environment -Impact of various laws on Indian businesses.		
Unit-3: Economic and Global Environment		14
Economic Environment - Meaning, Nature and Components of the Economic Environment, Factors affecting Economic Environment. Global environment -Meaning of Globalisation, Approaches to Globalisation, Merits and demerits of Globalisation, Impact of Globalisation on Indian businesses; Foreign market entry strategies; MNCs and TNCs (concepts only).		
Unit- 4: Technological Environment		10
Technological Environment: Meaning and features of Technological Environment; Impact of Technological changes on business, Technology and Society, Technology Transfer- Meaning, Benefits and Challenges.		
Unit- 5: Demographic and Natural Environment		10
Demographic Environment - Meaning and components of Demographic environment; Natural Environment: Meaning and Features of Natural environment. Impact of Natural environment on business.		

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Skill Development Activities:

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

Books for References:

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

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: 1.4 NAME OF THE COURSE: SPREADSHEET 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 <ol style="list-style-type: none"> To learn how to start working with MSEXCEL right from basics to Tables. To understand the various table formatting To equip students with various Functions in MS EXCEL To equip students with Data analysis functions 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-Sheet 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.		
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		

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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), FVSCCHEDULE, 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-ifAnalysis- 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.	
Skill Development Activities: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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	

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Syllabus - Semester II

Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: 2.1 NAME OF THE COURSE: ADVANCED 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 <ol style="list-style-type: none"> Understand & Compute the amount of Claims for Loss of Stock. Understand and preparing the accounts for converting Partnership Firms to Limited Companies. Deal with the Inter-Departmental Transfers and their Accounting Treatment. Articulate the Accounting treatment for Royalty Agreements & Transactions. Outline the Emerging Trends in the field of Accounting 		
SYLLABUS:		HOURS
Unit - 1: Insurance Claims for Loss of Stock		12
Insurance Claims- Meaning, Need and Advantages of Fire Insurance; Special terminologies in Fire Insurance Claims – Insurer, Insured, Premium, Salvage, Insurance Policy, Sum Assured, Under Insurance, Over Insurance, Average Clause; Ascertainment of Fire Insurance Claim including on Abnormal Line of Goods- Problems		
Unit - 2: Sale to a Company or Conversion of Partnership to a Limited Company		12
Introduction-Meaning of Sale or Conversion of Partnership-Meaning of Purchase Consideration – Methods of Calculating Purchase Consideration, Closing the books of Partnership Firm (Ledger Accounts only): Passing Opening Journal Entries and preparing Opening Balance Sheet (Vertical form) in the books of Company – Problems		
Unit - 3: Departmental Accounts		12
Meaning and Features of Departmental Undertakings; Examples of Department Specific Expenses and Common Expenses; Need and Bases of Apportionment of Common Expenses; Preparation of Statement of Profit in Columnar form, Statement of General Profit/Loss and Balance Sheet (Vertical form only); Inter-Departmental Transfers at Cost Price - Simple Problems		
Unit - 4: Royalty Accounts		12
Introduction-Meaning, Terms used in Royalty Agreement- Lessee, Lessor, Minimum Rent, Short Workings, Recoupment of Short Workings with Strike and Lockout Periods; Accounting Treatment in the book of Lessee only-Journal Entries and Ledger Accounts including Minimum Rent Account. (Excluding Sub-Lease and Lessor's books)- Problems		

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Unit - 5: Emerging Trends in Accounting	08
Digital transformation of Accounting; Big Data Analytics in Accounting; Cloud Computing in Accounting; Green Accounting; Human Resource Accounting; Inflation Accounting; Database Accounting.(Meaning and Features only)	

Skill Development Activities:

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

Reference Books:

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

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: 2.2 Name of the Course: HUMAN RESOURCE 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: <ul style="list-style-type: none"> 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.		
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		

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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 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.

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: 2.3 Name of the Course: BUSINESS REGULATIONS		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Field Work etc.		
Course Outcomes: On successful completion of the Course, the students will be able to: <ol style="list-style-type: none"> Comprehend the laws relating to Contracts and its application in business activities. Comprehend the rules for Sale of Goods and rights and duties of a buyer and a seller. Understand the significance of Consumer Protection Act and its features Understand the need for Environment Protection. 		
SYLLABUS:		HOURS
Unit-1: Regulation of Contracts-1		14
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: Regulation of Contracts-2		14
Consent- Meaning of Consent and Free Consent; Meaning and Effects of Coercion, Undue Influence, Fraud, Misrepresentation, Mistake in an agreement. Performance of Contract- Rules regarding Performance of Contracts, Joint Promisors, Impossibility of Performance, Quasi contracts & its performance Discharge of a Contract- Meaning of Discharge and modes of Discharging a Contract –Novation, Remission, Accord, Satisfaction and Breach-Anticipatory Breach and Actual breach Remedies for Breach of Contract- Remedies under Indian Contract Act 1872-Damages, Types of Damages.		
Unit-3: Contracts of Sale of Goods		12
Concept of Goods, Sale of Goods v. Agreement to Sell , Contract of Sale of Goods, Performance of a Contract of Sale of Goods, Meaning and Types of Conditions and Warranties, Meaning and Rights of an Unpaid Seller		
Unit-4: Regulation of Consumer Protection		08
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 Forum, State Commission and National Commission.		

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Unit-5: Regulation of Environmental Protection	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.	
<p>Skill Development Activities:</p> <ol style="list-style-type: none"> 1. Discuss the contents of the case of “Carlill vs Carbolic Smoke Ball Company” case 2. Discuss the contents of the case of “Mohori Bibee v/s Dharmodas Ghose”. 3. List out any five rights of a consumer. 4. List at least 5 items which can be categorized as ‘hazardous substance’ according to Environment Protection Act. 	
<p>Books for References:</p> <ol style="list-style-type: none"> 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 	

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: 2.4 NAME OF THE COURSE: DATABASE MANAGEMENT SYSTEM & SQL		
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 1. To Understand Database System Concept and Data Models Management Systems 2. To Understand Database design 3. To Understand the Concept of Operation and Management. 4. 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		
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		

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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.

Books for References:

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.