

# **St. Joseph's College of Commerce (Autonomous)**

163, Brigade Road, Bengaluru - 560 025

Accredited with 'A++' Grade (4<sup>th</sup> Cycle) by the National Assessment  
and Accreditation Council (NAAC)

Recognized by the UGC as  
"COLLEGE WITH POTENTIAL FOR EXCELLENCE"



## **Bachelor of Commerce (Analytics)**

### **Semester I & II**

*Syllabus as per Karnataka State Education Policy 2024*

*Curriculum Framework w.e.f., 2024-2025*

**Academic Year 2024 - 2025**

Batch 2024 - 2027

## **St. Joseph's College of Commerce (Autonomous)**

### **Affiliated to Bengaluru City University**

St. Joseph's College of Commerce (SJCC) was formerly a part of St. Joseph's College, established in the year 1882. The Commerce Department was established in the year 1949 and it became an independent college with its own building in Brigade Road in the year 1972.

The college has in its Vision a model for higher education which encourages individuals to dream of a socially just world and in its Mission a strategy to empower individuals in realizing that dream.

With an objective of imparting quality education in the field of Commerce and Management, the college has been innovating in all aspects of higher education over a long period of time. These innovations were further bolstered with the granting of autonomous status to the college by UGC in September 2005. From then on, the college has taken a lead in reforming curriculum and syllabus, examination and evaluation pattern and teaching and learning methods through the Board of Studies, the Academic Council and the Governing Council comprising of eminent academicians, industry representatives and notable alumni.

The college has undergone four cycles of NAAC accreditation starting from the year 2000 in which it secured 'five stars', next in the year 2007 an 'A' grade, in the year 2012 again an 'A' grade and recently in February 2021 an 'A++'. It is one of the very few institutions in the country to have secured A++ grade in the fourth cycle under the Revised Accreditation Framework (RAF) and the first college in Karnataka to do so. The college was declared as a 'College with Potential for Excellence' in the year 2010. In 2011, SJCC was recognized as a Research Centre by Bangalore University. The college has been ranked 55th in the National Institutional Ranking Framework (NIRF) ratings of Ministry of Education, Government of India, in 2024 and it has been the only institution from Karnataka to make it consistently to the top 100 in the country.

The college offers diverse programmes in Commerce, Business Administration, Arts and Science. Under Commerce Studies it offers B.Com, B.Com (Professional-International Accounting and Finance), B.Com (BPM- Industry Integrated), B.Com (Travel and Tourism), B.Com (Analytics), B.Com (Professional - Strategic Finance), M.Com (Finance & Taxation/ Marketing & Analytics), M.Com (International Business) & M.Com (Financial Analysis). Under Business Administration it offers BBA, BBA (Entrepreneurship) and BBA (Professional- Finance and Accountancy). Under Arts it offers BA (English, Communicative English and Psychology) and Under Science it offers B.Sc (Economics, Mathematics and Data Analytics). The college also offers five one-year Post Graduate Diploma programmes.

## **ABOUT THE DEPARTMENT**

The B. Com Department of St. Joseph's College of Commerce has efficiently streamlined all its courses to reflect an interdisciplinary approach to understanding the contemporary business environment. Its aim is to construct a strong foundation in core subjects such as Accounting, Taxation, Economics, Statistics and Auditing along with a choice of Cost Accounting, Finance, Business Analytics, Marketing and Human Resources, studied in the fifth and sixth semester. The courses are challenging, yet, rewarding for students with high aspirations. Our students have been sought after by employers for their excellent knowledge, skills and attitude, giving them an edge over their peers from other institutions. The B.Com Programme of the college is rated amongst the top 10 in the country (India Today, AC Nielson Survey 2016).

### **OBJECTIVES OF THE B.COM PROGRAMME**

- a. To provide conceptual knowledge and application skills in the domain of Commerce studies.
- b. To provide knowledge in all the areas of business to be able to meet expectations of Commerce, Trade and Industry.
- c. To sharpen the students' analytical and decision-making skills.
- d. To provide a good foundation to students who plan to pursue professional programmes like CA, ICWAI, ACS, CFA and MBA.
- e. To facilitate students to acquire skills and abilities to become competent and competitive in order to be assured of good careers and job placements.
- f. To develop entrepreneurship abilities and managerial skills in students so as to enable them to establish and manage their own business establishments effectively.
- g. To develop ethical business professionals with a broad understanding of business from an interdisciplinary perspective.

### **I. ELIGIBILITY FOR ADMISSION**

Candidates who have completed the two-year Pre-University course of Karnataka State or its equivalent are eligible for admission into this Programme.

### **II. DURATION OF THE PROGRAMME**

The duration of the programme is three (03) years of Six Semesters. A candidate shall complete his/her degree within five (5) 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.

### **III. MEDIUM OF INSTRUCTION**

The medium of instruction shall be in English.

#### IV. ATTENDANCE

- a. 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.
- b. A student who fails to complete the course in the manner stated above shall not be permitted to take the End Semester Examination.

#### V. TEACHING AND EVALUATION

M.Com/MBA/MFA/MBS/MTA/MA/M.Sc graduates with B.Com, B.B.A, B.B.S,BA and B.Sc as basic degree from a recognized university are only eligible to teach and to evaluate the courses including part - B courses of I and II semesters except languages, compulsory additional courses and core Information Technology related courses, Skill based, Value Based and Foundation courses, mentioned in this regulation. These courses shall be taught by the Post graduates as recognized by the respective Board of Studies.

#### VI. SCHEME OF EXAMINATION

ACADEMIC EVALUATION UNDER STATE EDUCATION POLICY (SEP)  
(EFFECTIVE FROM ACADEMIC YEAR 2024-2025)

The academic evaluation of both undergraduate (UG) and postgraduate (PG) programmes consists of two components: Continuous Internal Assessment (Formative Assessment) and End-Semester Examination (Summative Assessment).

**Assessment for UG Students under SEP will be as follows:**

Type of Assessment	Assessment Component	Allotted Marks
Continuous Internal Assessment / Formative Assessment	CIA I (Test)	10 Marks
	CIA II (Skill-based Assessment)	10 Marks
	Mid-Term Exam	20 Marks
<b>Total</b>	<b>40 marks (scaled down to 20 marks)</b>	
End-Semester Examination / Summative Assessment	End-Semester Examination (For three hours duration)	80 Marks
<b>TOTAL</b>		<b>100 Marks</b>

##### A. Additional Details

- **Mid-Term Exam:** The mid-term exam covers at least 40-50% of the syllabus and has duration of one hour.
- **Continuous Internal Assessment (CIA) Activities:** CIA activities are designed with clear objectives, modalities, assessment rubrics, and outcomes.

##### B. CIA improvement

There is **no provision for enhancing CIA marks** for UG students once the semester ends.

**Attendance requirement for taking ESE**

- The University Grants Commission (UGC) mandates a minimum of 75% attendance in each course to be eligible to write the End Semester Examinations (ESE).
- There is no provision for condonation of attendance under the UGC Act.

**VII. MINIMUM FOR A PASS**

- **Minimum Pass Marks in Final Examination:** A minimum of 40 percent is required in each course in the End Semester Exams. The student must score at least 32 marks out of 80 in the End Semester Examination (ESE).
- **Overall Pass Requirement:** The aggregate of Continuous Internal Assessment (CIA) and End Semester Examination (ESE) should also be a minimum of 40 percent. Out of 100 marks, a student must secure at least 40 marks in each course to qualify as passed inclusive of minimum 32 marks out of 80 in End Semester Exam.

**VIII. GRADING SYSTEM FOR CHOICE BASED CREDIT SYSTEM (CBCS)**

The modalities and operational details are given below:

- **Grade Points:** The College adopts a ten-point grading system. The papers are marked in a conventional way for 100 marks. The marks obtained are converted to grade point according to the following table. If a student is absent for the paper the grade point assigned is 0.

% Marks	95 - 100	90 - 94	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	55 - 59	50 - 54	45 - 49	40 - 44	Below 40
Grade Point	10	9.5	9	8.5	8	7.5	7	6.5	6	5.5	5	4.5	0

**Credits:** Credits are assigned to courses based on the following broad classification:

Courses Category	Instruction Hours/week	Credits
Languages	3 Hours	3
Major Core	4 Hours	4
Skill Enhancement Courses	1-4 Hours	1-4
Compulsory Courses	1-2 Hours	1-2

**Grade point calculation**

- **Semester Grade Point Average (SGPA):** The SGPA is calculated as the sum of the product of the credits and the grade points scored in all courses, divided by the total credits.

$$\text{SGPA} = \frac{\text{Total of (Credits Earned X Grade Points)}}{\text{Total of Corresponding Credits}}$$

- Minimum SGPA required for a pass is 4.5.
- If a student has not passed in all courses or is absent, the SGPA is not assigned.
- **Cumulative Grade Point Average (CGPA):** The CGPA is the weighted average of all the courses taken by a student across all semesters of a programme.

$$\text{CGPA} = \frac{\sum \text{Total Credits in the Semester} \times \text{SGPA}}{\text{Total Credits of the Courses}}$$

Note: SGPA and CGPA will be rounded off to two decimal places.

### Interpretation of SGPA/CGPA and Classification of Final Result

Grade Points	% of Marks	Grade	Result/Class Description
9.00-10.00	85 - 100	O	Outstanding
8.00-8.99	75 - 85	A+	First Class Exemplary
7.00-7.99	65 - 75	A	First Class Distinction
6.00-6.99	55 - 65	B+	First Class
5.50-5.99	50 - 55	B	High Second Class
5.00-5.49	45 - 50	C	Second Class
4.50 - 4.99	40 - 45	P	Pass Class
Below 4.5	Below 40	RA	To Re-Appear

### IX. PATTERN OF ESE QUESTION PAPER UNDER SEP

The End Semester Examination (ESE) question paper under SEP will include questions that assess both Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS). The difficulty level of the question paper will be distributed as follows: 40% easy, 30% difficult, and 30% very challenging.

- **Duration:** 3 Hours
- **Maximum Marks:** 80

The question paper pattern will be as follows:

<b>Sections</b>	<b>Marks perQuestion</b>	<b>Number of Questions</b>	<b>Total Marks</b>
SectionA	2 marks	5 questions (outof 7)	10 Marks
SectionB	5 marks	4 questions (outof 6)	20 Marks
SectionC	12 marks	3 questions (outof 5)	36 Marks
SectionD	14 marks	1 question (Case Study)	14 Marks
<b>Total</b>			<b>80 Marks</b>

#### **X. REVALUATION AND RETOTALING**

Requests for **revaluation, retotaling, and photocopies of the answer book** for the End-Semester Examination (ESE) must be submitted to the Controller of Examination along with the prescribed fee within two weeks from the declaration of results.

#### **XI. ABSENCE DURING END SEMESTER EXAMINATION**

If a student misses the End Semester Examination, they will be marked as "Absent" and will be required to take the supplementary examination for that course during the next available opportunity only.

#### **XII. MALPRACTICE**

Students will be dealt severally in case if they are found guilty of any malpractices during examination. The college has zero tolerance towards any kind of ~~four~~ means adopted to secure marks in the exams.

## Outcome Based Education (OBE)

### PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

Our **B. Com (Analytics)** program will produce graduates who will:

PE 01	Be competent, creative and highly valued professionals in industry, academia, or government.
PE 02	Adapt to a rapidly changing environment with newly learnt and applied skills and competencies, become socially responsible and value driven citizens, committed to sustainable development
PE 03	Act with conscience of global, ethical, societal, ecological and commercial awareness with sustainable values as is expected of professionals contributing to the country.
PE 04	Able to continue their professional development by obtaining advanced degrees in accounting and other professional fields.

### PROGRAMME OUTCOMES (POS)

After the completion of the **B. Com (Analytics)** Programme, the student will be able to:

<b>PO 1</b>	<b>Disciplinary and Inter-disciplinary Knowledge:</b> Demonstrate the understanding of relevant business, management and organization knowledge, both academic and professional, in line with industry standards
<b>PO 2</b>	<b>Decision Making Skill:</b> Apply underlying concepts, principles, and techniques of analysis, both within and outside the discipline to generate all the possible solutions and pick one that shows their understanding of the problem and the outcomes.
<b>PO 3</b>	<b>Integrated Problem-Solving and Research:</b> Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems by analyzing key managerial issues in a particular industry or company and propose appropriate managerial solutions to the situation
<b>PO 4</b>	<b>Critical Thinking Skill:</b> Evaluate evidence, arguments, claims and beliefs by using right type of reasoning as appropriate to the situation and Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems.
<b>PO 5</b>	<b>Creative Thinking Skill:</b> Develop, implement and communicate new and worthwhile ideas using both incremental and radical concepts to make a real and useful contribution to their work
<b>PO 6</b>	<b>Usage of Modern Technology and Tools:</b> Use tools and technologies of digital nature, communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.



<b>PO 7</b>	<b>Leadership and Team Work:</b> Develop a vision, translate that vision into shared goals, and effectively work with others to achieve these goals
<b>PO 8</b>	<b>Ethical Conduct:</b> Act responsibly and sustainably at local, national, and global levels.
<b>PO 9</b>	<b>Collaboration:</b> Work collaboratively and respectfully as members and leaders of diverse teams.
<b>PO 10</b>	<b>Self-Directed and Life-Long Learning:</b> Create goals and monitor progress toward them by developing an awareness of the personal, environmental and task-specific factors that affect the attainment of the goals.

### PROGRAMME SPECIFIC OUTCOMES (PSOS)

<b>PO 11</b>	<b>Developing analytical model</b>  Develop models to identify and evaluate complex business challenges by analysing data using analytical techniques and visualising tools.
<b>PO 12</b>	<b>Application of analytical model</b>  Apply appropriate analytical methods into the core business operations and to leverage data to cultivate and nourish informed decision-making.

B.COM (Analytics) - PROGRAMME							
PROGRAMME MATRIX AS PER STATE EDUCATION POLICY							
Course Category	I	II	III	IV	V	VI	TOTAL
<b>Part A : Languages</b>							
Language 3 Hrs/3 Crs	Lan 1	Lan 1	Lan 1	Lan 1	-	-	
	Lan 2	Lan 2	Lan 2	Lan 2	-	-	
I	6 Crs	6 Crs	6 Crs	6 Crs	-	-	24
<b>Part B: Discipline Specific Core Courses</b>							
Major Core Courses 4 Hrs/4 Crs	Financial Accounting	Corporate Accounting	Financial Management	Cost Accounting	Management Accounting	Operations Research	
	Business Statistics I	Business Statistics II	Programming for Analytics	Business Statistics with R Programming	Income Tax I	Income Tax II	
	Mathematics	Business Economics	Human Resource Management	Principles & Practices of Auditing	Data Visualisation	Text Mining	
	Principles of Management	Business Law	Marketing Management	Theory & Practice of Banking	NIL	Goods and Service Tax	
Major Elective Courses 4 Hrs/4 Crs					Multivariate Data Analysis	Data Mining with R	
	16	16	16	16	16	20	100
<b>Part C : Skill Enhancement Courses /Activities</b>							
Skill Based Courses /activities			Decision making using Spreadsheets 2Crs	Data Visualisation through Power BI 2Crs	Research Methodology (4 Crs)	Internship 4Crs	
		MOOCs / Certificate Course 1 Cr	-	MOOCs / Certificate Course 1 Cr	Project (4Crs)	-	
Value Based Activities		Extracurricular Activities 1 Cr		Extracurricular Activities 1 Cr		Extension Activities 1 Cr	
II		2 Crs	2 Crs	4 Crs	8 Crs	5 Crs	21
<b>Part D: Foundation Course - Value Based</b>							
Foundation Courses 2 Hrs/2 Crs	Psychological Well being 1 Cr	-	-	-	-	-	
	Constitutional Value I 2 Crs	Constitutional Value II 2 Crs					
III	3 Crs	2 Crs					5
Total	25 Crs	26 Crs	24Crs	26Crs	24 Crs	25Crs	150

## B. Com (Analytics)

### Course Structure

#### Semester I

Course Code	Title of the Course	Category	Lecture Hours per week	CIA	ESE	Credits
C5 24 GE 101	General English	Language 1	3	20	80	3
C5 24 KN 101	Kannada	Language 2	3	20	80	3
C5 24 HN 101	Hindi					
C5 24 AE 101	Additional English					
C5 24 MC 101	Financial Accounting	Major Core	4	20	80	4
C5 24 MC 102	Business Statistics I	Major Core	4	20	80	4
C5 24 MC 103	Mathematics	Major Core	4	20	80	4
C5 24 MC 104	Principles of Management	Major Core	4	20	80	4
UG 24 FC 101	Psychological wellbeing	Compulsory course	1	25	-	1
UG 24CC 101	Constitutional Values I	Compulsory Course	2	10	40	2
<b>Total credits</b>				<b>155</b>	<b>520</b>	<b>25</b>

Department of Commerce Programme: B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	C5 24 MC 101	Financial Accounting	60 Hours	Major Core	4 Hours	4
<b>Course Objectives:</b>	The course aims to equip the students with the conceptual knowledge and skills required to prepare and evaluate financial statements of different business organizations.					
<b>Course Outcomes</b>	CO1	Describe the concepts, conventions, and Terms of Financial Accounting as per the framework of Ind AS and IFRS.				
	CO2	Prepare Journal, Ledger and trial balance and rectification of errors as per Ind AS 8 and 10.				
	CO3	Construct financial Statements of Sole Proprietorship and Partnership incorporating all the necessary adjustments.				
	CO4	Apply the format of the presentation of Financial Statement as per Ind AS to the Companies Act, 2013 (Amended till date).				
	CO5	Prepare Cash flow statements as per old and new methods.				
	CO6	Evaluate firm's Profitability and Liquidity by using Ratio analysis and Trend Analysis.				
<b>Module 1</b>	<b>Conceptual Framework</b>					<b>10 Hours</b>
Introduction to Ind AS, IFRS, Challenges in implementation, Accounting Concepts - Accrual concept, Going Concern Concept, Business Entity Concept, Consistency Concept, Elements - Assets, Liabilities, Incomes, Expenditure and Equity for Sole proprietor, Partnership firm and Company. Four Pillars of accounting and Accounting Equation. Applicability of Ind AS - Voluntary Adoption and Mandatory Applicability - Phase I, II, III and IV. Role of accountant - Ethical values - Integrity, Objectivity, Professional competence and care, confidentiality, Professional behaviour.						
<b>Module 2</b>	<b>Accounting Process</b>					<b>10 Hours</b>
Accounting Process - Journal (including transactions covering GST on purchases and sales), Ledger, and Trial Balance, Rectification of Errors (Journal entry problems)						
<b>Module 3</b>	<b>Financial Statements</b>					<b>15 Hours</b>
Preparation of Financial statements- Profit & Loss statement and Balance Sheet. Adjustments for Ongoing transactions- Goods & cash withdrawn by proprietor, goods lost by fire, goods issued as free sample, Prepaid expenses, Outstanding expenses, Interest on capital, Interest on drawings, Interest on loan, Provision for Bad debts and Doubtful debts, Depreciation, Commission payable before and after charging such commission. (Sole proprietor and Partnership Firm)						
<b>Module 4</b>	<b>Company Financial Statements</b>					<b>5 Hours</b>

Company Financial Statements - Objectives, Format of the presentation of Financial Statement as per Ind AS to the Companies Act, 2013 (Amended till date).												
<b>Module 5</b>		<b>Preparation and Presentation of Cash flow Statement</b>									<b>10 Hours</b>	
Meaning of Cash flow, Classification of Activities - Operating, Investing and Financing (Simple problems on identification of activities).												
<b>Module 6</b>		<b>Basic Financial Statement Analysis</b>									<b>10 Hours</b>	
Introduction to Ratios - Computation of ratios based on liquidity, Solvency, Activity & Profitability [problems based on calculation of ratios] - Trend Analysis												
<b>Skill Development:</b>												
1		Generate financial statements using Tally										
2		Prepare and present a summary on a company's published annual report which includes profitability analysis, financial position, cash position and accounting policies.										
3		Compute the profitability ratios, turnover ratios and solvency ratios on the published financial statement of a company of your choice.										
4		Compare and analyse the profitability ratios, solvency ratios between two companies using published financial statements.										
5		Analyse a cash flow statement with from published annual report.										
<b>Book for Reference:</b>												
1		Jain, S. P., & Narang, K. L. (2022). <i>Advanced Accounts</i> (12th ed.). Kalyani Publishers.										
2		Maheshwari, S. N. (2022). <i>Advanced Accountancy</i> (5th ed.). Vikas Publishing House.										
3		Sehgal, A., & Sehgal, D. (2022). <i>Advanced Accounting</i> (2nd ed.). Taxmann.										
4		Shukla, M., & Grewal, T. (2022). <i>Advanced Accountancy</i> (11th ed.). Sultan Chand & Sons.										
5		Banka, A. (2022). <i>Comprehensive guide to IND AS Implementation</i> (2nd ed.). Taxmann.										
6		International Accounting Standards Board (IASB). (2023). <i>IFRS publications</i> . IASB.										
<b>Mapping of CO and PO</b>												
<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>
CO1	H	H	M	M	L			L				L
CO2	L	M		L	H	H					M	L
CO3	L	M		L	H	H					M	L
CO4	M	H	H	M		L					L	L
CO5	L	M		L	H	H					M	L
CO6	L			H	H	M				L	M	L

Department of Commerce Programme: B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	C5 24 MC 102	<b>BUSINESS STATISTIC S - I</b>	60 Hours	Major Core	4	4
<b>Course Objectives:</b>	The course aims to create the awareness of the basic concept of Statistics and scope of its application in business decision making using various tools.					
<b>Course Outcomes</b>	<b>CO1</b>	Explain the basic concept of Statistics and scope of its application in business decision making.				
	<b>CO2</b>	Choose an appropriate measure of central tendency to analyze the given data for business decision making.				
	<b>CO3</b>	Justify the application of measures of dispersion to analyze the given data for consistency of diverse phenomenon.				
	<b>CO4</b>	Show the statistical data, construct and comprehend in Diagrammatic and graphic representation.				
	<b>CO5</b>	Use the concept of Skewness and Kurtosis to determine the type of distribution and tail of the distribution.				
<b>Module 1</b>	<b>Introduction</b>					<b>10 Hours</b>
Definition - Need for Statistics - Scope - Limitations - Definition of Research - Scope - Types - Objectives - Steps in Research. Ethics to be followed by a statistician and role of statistics in sustainable development. Classification of data - Formation of Statistical Series - Frequency Distribution (univariate and bivariate) and Tabulation. Population - Sample -Types of Data - Primary and Secondary Data: Qualitative - Quantitative - Cross Sectional - Time Series - Variables and Attributes - Discrete and Continuous Variables - Types of Scales- nominal, ordinal, ratio and interval.						
<b>Module 2</b>	<b>Measures of Central Tendency</b>					<b>15 Hours</b>
Meaning of Central Tendency - Definition - Types of Averages - Arithmetic Mean(Simple, Weighted and Combined). Median - Mode (excluding missing frequency problems) - Quartiles - Deciles - Percentiles (applications, importance, merits and demerits)						
<b>Module 3</b>	<b>Measures of Dispersion</b>					<b>12 Hours</b>



CO1	H	H	M	L	L					L	M	
CO2	H	M	M	L	L			L			H	
CO3	L	H	M	L	H			L				M
CO4	M	L	H	L	H					L		M
CO5	M	M	H	L	L			L				H

Department of Commerce Programme: B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	C5 24 MC 103	Mathematics	60 Hours	Major Core	4	4
<b>Course Objectives:</b>	This course aims to provide students with a firm grasp of key matrix algebra, differential and integral calculus, and mathematical modelling. Through theoretical learning and practical applications, students will develop essential problem-solving skills relevant to mathematical analysis in addressing real-world problems in Commerce and Economics.					
<b>Course Outcomes</b>	CO1	Explain and apply the concepts like Matrices, Determinants, Algebra, integral calculus, Differential calculus and differential equations in Economics and Managerial decision making.				
	CO2	Formulate cost, profit, revenue functions and optimize the same using maxima-minima procedure.				
	CO3	Model and address the dynamic real-world problems in Business and Economics using differential equations.				
	CO4	Develop a comprehensive understanding of differential calculus and its practical applications, enabling them to solve optimization problems in various fields, including economics, business, and science.				
	CO5	Solve both theoretical and practical problems involving integration, equipping them with the tools necessary for analyzing and solving business-related problems in areas such as economics, management, and finance				
	CO6	Apply the theory and techniques of differential equations to model and solve practical problems in various fields.				
<b>Module 1</b>	<b>Matrices, Determinants and Applications</b>					<b>15 Hours</b>



<p>Matrices: Review of fundamentals: Definition of matrix, order, Types of matrices, Determinant: Value of determinant of order 2x2 and 3x3, minors, cofactors, adjoint, row operations, inverse using formula method and row operations (2x2 and 3x3 matrices only). System of linear equations, augmented matrix, row operations, row echelon form, reduced row echelon form, existence and uniqueness of the solution, Gauss - Elimination method, Cramer's and matrix methods (2x2 and 3x3 matrices only).</p> <p>Applications – Linear systems: Investment Problems, Traffic Flow, and Balancing the Chemical equations, and data encryption and decryption using a matrix and its inverse.</p>		
<b>Module 2</b>	<b>Algebra</b>	<b>10 Hours</b>
<p>Equations, Degree, Roots of an equation (Including complex roots), Solving Linear and Quadratic equations, Cubic Equations, Synthetic Division Method, Bi-quadratic equations, Nature of the roots, Binomial Theorem (statement and expression only), and Partial Fractions.</p>		
<b>Module 3</b>	<b>Eigen values and Eigenvectors</b>	<b>10 Hours</b>
<p>Definition, Characteristic equation, Eigen values, Eigen vectors (2x2 and 3x3 matrices only). Cayley Hamilton theorem (Only statement), verification of Cayley Hamilton theorem (only 2x2 and 3x3 matrices), using the same finding the powers of A and Inverse of a Matrix using Cayley Hamilton theorem.</p>		
<b>Module 4</b>	<b>Differential Calculus</b>	<b>15 Hours</b>
<p>Functions, Limits and Continuity, Differentiability (concepts only), Derivative of a function, derivatives of the standard functions (excluding trigonometric functions), Rules of Differentiation: addition/subtraction, scalar multiplication, product, quotient, chain, Differentiation of Parametric functions, Partial Derivatives, Maxima and Minima, Applications: Cost minimization and Revenue and Profit maximization, Break Even Point, Marginal Cost, Marginal Revenue, and price elasticity of demand.</p>		
<b>Module 5</b>	<b>Integral Calculus</b>	<b>15 Hours</b>
<p>Introduction, Indefinite Integration, Standard Integrals (excluding trigonometric functions), Rules of Integration: addition/subtraction and scalar multiplication, Integration by Substitution, Integration by Parts, Integration by resolving into Partial Fractions, Applications of Integration in business (finding cost, revenue functions from marginal cost and marginal revenue functions)</p>		
<b>Module 6</b>	<b>Mathematical modelling through Differential Equations</b>	<b>10 Hours</b>
<p>First order Linear Ordinary Differential Equations, Homogeneous and Non-Homogeneous Differential Equations. Applications- Exponential Growth model (Continuous compounding of an invested money) and Logistic Growth model (Business applications: fishery, rabbits, piggery etc.)</p>		
<b>Skill Development:</b>		
1	Solve and visual system of linear equations with 3 variables on GeoGebra website (Math visualizer platform)	

2	Represent the functions graphically and identify the roots on a math visualizer software.
3	Understand maxima - minima procedure graphically through a math visualizer software.

**Book for Reference:**

1	Arora, P. N., & Arora, S. (2021). <i>Mathematics</i> (2nd ed.). S. Chand Publishing.
2	Agarwal, D. R. (2022). <i>Comprehensive Mathematics</i> (6th ed.). Tata McGraw-Hill Education.
3	Sharma, A. (2021). <i>Business Mathematics and Analytics</i> . Wiley.
4.	Goel, A., & Goel, A. (2021). <i>Mathematics and Statistics</i> . Laxmi Publications.
5	Singh, J. K. (2021). <i>Business Mathematics</i> (3rd ed.). Tata McGraw-Hill Education.
6	Stall, R. R. (2015). <i>Linear Algebra and Matrix Theory</i> (2nd ed.). Jones & Bartlett Learning.

**Mapping of CO and PO**

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1				L	L	H	M				M	H
CO2	L			L			M		H		H	M
CO3	L			L		M	H				H	M
CO4	L				M	M					H	H
CO5	L		L			M	H				H	M
CO6	L		L	L				H		M	M	H

Department of Commerce Programme: B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	C5 24 MC 104	Principles of Management	60 hours	Major Core	4	4
<b>Course Objectives:</b>	The course content is designed with a view to acquaint students with the concepts and principles of management required for a successful business entity.					
<b>Course Outcomes</b>	CO1	Explain the principles of Management and role and skills of a Manager.				
	CO2	Integrate the planning, forecasting with decision making process of a given organization.				
	CO3	Relate the function of organizing with staffing in consideration of their effort on individual actions.				
	CO4	Identify the range of leadership theories, Directing and controlling tools available in the management.				
	CO5	Illustrate the range of motivation theories and methods of coordination available for the management practices.				
	CO6	Describe the factors affecting ethical practices in Business and social responsibilities of management towards all the stakeholders and identify the recent trends in the application of technology in Management.				
<b>Module 1</b>	<b>Introduction to Management and History of Management Thought</b>					<b>12 Hours</b>
<p>Introduction: Meaning - Nature and Characteristics of Management - Scope and Functional Areas of Management - Management as an Art, Science or Profession - Management and Administration - Principles of Management (scientific principles, Fayol's 14 principles)- Roles and skills of managers.</p> <p>Evolution of Management Thought: Pre-scientific Management (introduction to classical theories) - Taylor's Scientific Management</p>						
<b>Module 2</b>	<b>Planning Forecasting and Decision Making</b>					<b>10 Hours</b>
<p>Planning: Nature - Planning Process - Objectives - Types of plans - MBO (Peter Drucker) &amp; MBE</p> <p>Forecasting: Meaning and purpose of forecasting - Techniques of forecasting - Qualitative and quantitative.</p> <p>Decision Making: Meaning - Types of decisions - phases of Decision Making - Steps in decision making - Delegation and Principles of delegation.</p>						

<b>Module 3</b>	<b>Organizing and Staffing</b>	<b>10 Hours</b>
<p>Organizing: Nature and Purpose of Organization – Principles of Organization- Organization structure and types – Departmentation – Committees – Centralization vs. Decentralization of Authority – Span of Control – Meaning - Factors affecting span. Staffing: Importance and Process of Staffing.</p>		
<b>Module 4</b>	<b>Leadership, Directing and Controlling</b>	<b>10 Hours</b>
<p>Leadership: Meaning – Leadership styles – Theories of leadership. Directing: Meaning –Principles and techniques of directing.</p> <p>Controlling: Meaning and definition – Features – Steps in controlling and methods of establishing control. Techniques of controlling – Budgetary and non-budgetary.</p>		
<b>Module 5</b>	<b>Co-ordination and Motivation</b>	<b>12 Hours</b>
<p>Co-ordination: Meaning – steps and methods of co-ordination.</p> <p>Motivation: Meaning - Theories of motivation – Carrot &amp; Stick approach – Maslow’s – Mc Gregor’s – Herzberg’s – ERG – Mc Clelland’s – Vroom’s Expectancy - William Ouchi’s theory Z.</p>		
<b>Module 6</b>	<b>Business Ethics and Recent trends in Management</b>	<b>6 Hours</b>
<p>Meaning – Need and importance - Principles of ethics -profits and ethics – Factors affecting ethical practices in Business Social Responsibilities of Management – Meaning, Social responsibilities of business towards various groups.</p> <p><b>Recent Trends in Management</b> – Continuing digitization in the business world, ArtificialIntelligence in various functions of management, importance of data and analytics in management</p>		
<b>Self-Learning Topics: (If Applicable)</b>		
1	Module 1: Scientific principles, Fayol’s 14 principles, Classical Theories	
2	Module 3: Importance and Process of Staffing.	
<b>Skill Development:</b>		
1	Evaluate the innovate concepts of Principles of Management laid on HenryFayol in different industries.	
2	Examine the impact of strategic partnerships with market research firms	
3	Analyze the impact of expansion from product to channel & customer profitability analysis.	
4	Application of Predictive accounting & business intelligence on EnterprisePerformance Management.	

5	Present the Seven C attributes shared by experts of Covid 19 pandemic in Harvard School Business Working Knowledge. Analyse these attributes and their applicability in the Indian Corporate Scenario.
---	--

**Book for Reference:**

1	Vasishth, N., & Vasishth, V. (2019). <i>Principles of Management: Text &amp; Cases</i> (5th ed.). Taxmann Publications.
2	Robbins, S. P., Coulter, M., & Fernandez, A. (2019). <i>Management</i> (14th ed.). Pearson Education.
3	Durai, P. (2018). <i>Principles of Management</i> (2nd ed.). Pearson India.
4	McShane, S. L., & Von Glinow, M. A. (2007). <i>Principles of Management</i> (1st ed.). McGraw-Hill Education.

**Mapping of CO and PO**

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	M	L	M	H				L		L	

CO2	H	H	M	M	L			L				L
CO3	H	M	H	M	L			L			L	
CO4	H	M	M	L	H						L	L
CO5	M	H	M	L	H			L			L	
CO6	M	M	H	M	H		L	L			L	

Department of Commerce Programme: B. Com Analytics						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	UG 24 FC 101	Psychological Well-being	30	Compulsory Course	2	2
<b>Course Objectives:</b>	This course aims to nurture self-awareness and meaningful relationship skills and to help in the development of emotional quotient and inter-personal skills.					
<b>Course Outcomes</b>	CO1	Develop a better emotional quotient.				
	CO2	Formulate a healthier sense of self through self-awareness.				
	CO3	Build more meaningful relationships.				
	CO4	Display an improvement in inter-personal skills.				
	CO5	Modify thought and belief patterns.				
	CO6	Understand and deal the grief in various situations.				
<b>Module 1</b>	<b>Introduction</b>					<b>3 Hours</b>
Meaning of Counselling - Myths and Facts related to Counselling - Breaking stigmas related to seeking counselling - Normalizing seeking help - Self-reflection through concentric circles						
<b>Module 2</b>	<b>Intra-personal and Inter-personal Awareness</b>					<b>10 Hours</b>

<p>Meaning of self-esteem – Factors that influence self-esteem – Importance of self- esteem – Effects of low self-esteem – Qualities seen in people with high vs. low self- esteem – How to improve self-esteem – Self-awareness activity</p> <p>Meaning of peer pressure – Different kinds of peer pressure – Resisting peer pressure – Confronting peer pressure – Group sharing activity</p> <p>Meaning of relationships – Types of relationships – Healthy relationship dynamics – Personal Rights in a relationship – Components of a healthy relationship – Types of abuse in a relationship – Intimacy and understanding our needs – Boundaries</p>		
<b>Module 3</b>	<b>Understanding Emotions</b>	<b>4 Hours</b>
<p>Meaning of emotions – Role of emotions in our lives – Beliefs regarding emotions – Harmful effects of suppressing emotions – Signs of emotional suppression – Handling emotions in a healthy manner – Self-assessment activity</p>		
<b>Module 4</b>	<b>Anger management</b>	<b>5 Hours</b>
<p>Meaning of anger – Physical and Emotional symptoms of anger – Different ways that people express anger – Expression and experience of anger – What makes us angry and what it means when we’re angry – Dealing with anger – Guided visualization and art activity</p>		
<b>Module 5</b>	<b>Managing Anxiety/Fear</b>	<b>4 Hours</b>
<p>Meaning of fear – Types of fear – Physical and Emotional symptoms of fear – Different reactions to fear – Overcoming fear – Art work followed by group sharing activity</p>		
<b>Module 6</b>	<b>Dealing with Loss and Grief</b>	<b>4 Hours</b>
<p>Understanding loss and grief – Form of loss – Stages of grief – Dangers of not grieving- Dealing with grief – Ways to help others in grief</p>		
<b>Skill Development:</b>		
1		
2		
3		
4		
5		
6		
<b>Book for Reference:</b>		
1	Jones, R. N. (2023). <i>Theory and Practice of Counselling and Therapy</i> (5th ed.). SAGE South Asia	
2	Ryff, C. D., & Singer, B. (2008). <i>Know thyself and become what you are: A Eudaimonic approach to psychological well-being</i> . In J. D. Wright (Ed.), <i>International Encyclopedia of the social sciences</i> (2nd ed., Vol. 8, pp. 143-148). Macmillan.	
3	Seligman, M. E. P. (2011). <i>Flourish: A New Understanding of Happiness and Well-being – and how to achieve them</i> . Free Press	
4	Lyubomirsky, S. (2007). <i>The How of Happiness: A Scientific Approach to getting the life you want</i> . Penguin Press.	
5	Neff, K. D. (2011). <i>Self-Compassion: The proven power of being kind to yourself</i> . William Morrow.	
6	Gilbert, P. (2010). <i>The Compassionate Mind: A new approach to life's challenges</i> . Constable.	

## Mapping of CO and PO





Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
I	UG 24 CC 101	Constitutional Values I	30 Hours	Compulsory Course	2	2
<b>Course Objectives:</b>	This course aims to provide a comprehensive understanding of constitutional values in India, focusing on the foundational principles, evolution, and practical application of the Constitution. It seeks to analyze the interplay between constitutional rigidity and flexibility in shaping democratic governance and the role of constitutionalism in upholding democratic ideals.					
<b>Course Outcomes</b>						<b>T levels</b>
CO1	Analyze and explain the significance of constitutional rigidity and flexibility in the context of democratic values.					T4
CO2	Evaluate the contributions of key figures like Dr. B.R. Ambedkar, Nehru, and Patel in the making of the Indian Constitution.					T5
CO3	Demonstrate the impact of Fundamental Rights, Directive Principles, and Fundamental Duties in promoting social justice, unity, and integrity in India..					T3
<b>Module 1</b>	<b>Introduction - Constitution of India, Constituent Assembly, Preamble</b>					<b>10 Hrs</b>
<p>i. The Making of the Constitution of India: Evolution, Nationalist Movement, Composition of the Constituent Assembly, Committees of the Constituent Assembly, Enactment of the Constitution.</p> <p>ii. Constituent Assembly: Role of Dr B.R. Ambedkar, Javaharlal Nehru, Sardar Vallababhai Patel</p> <p>iii. Preamble of the Indian Constitution - Values enshrined in the Preamble; Sovereign, Secular, Socialistic, Democratic, Republic, Justice, Liberty, Equality and Fraternity.</p>						
<b>Module 2</b>	<b>Fundamental Rights and Duties</b>					<b>10 Hrs</b>
<p>i. Salient Features of Indian Constitution and Basic Structure</p> <p>ii. Fundamental Rights and how these Rights are safeguarding individual liberties</p> <p>iii. Directive Principles of the State Policy; Socialist, Gandhian, and Liberal-Intellectual.</p> <p>iv. Fundamental Duties</p>						
<b>Module 3</b>	<b>Union Legislature, Executive and Judiciary</b>					<b>10 Hrs</b>

i. Union Legislature – Parliament; Lok Sabha, Rajya Sabha – Composition, powers, functions  
ii. Union Executive – President, Vice – President, Prime Minister, Union Council of Ministry, powers and functions, Leadership and collective responsibility  
iii. Judiciary – Supreme Court, High Courts, powers and functions and Judicial Activism in India

**Skill Development:**

1	Make a chart of evolution of Constitution of India and the Preamble.
---	--

2	Identify a case/scenario and analyse the fundamental rights and duties of the parties involved.												
3	Make a chart of the powers and functions of Union legislature, executive and the judiciary.												
<b>Book for Reference:</b>													
1	<i>B. K. Sharma, Introduction to the Constitution of India, Prentice Hall of India, New Delhi, 2002.</i>												
2	<i>Austin, G. (1999). The Indian Constitution: Cornerstone of a Nation. Oxford University Press.</i>												
3	<i>P. M Bakshi, Constitution of India, Universal Law Publishing House, New Delhi, 1999</i>												
4	<i>D. D. Basu, Introduction to the Constitution of India, Prentice Hall of India, New Delhi, 1982.</i>												
5	<i>D. C. Gupta, Indian Government and Politics, Vikas publishing House, New Delhi, 1975</i>												
6	<i>S. N. Jha, Indian Political System, Historical Developments, Ganga Kaveri Publishing House, Varanasi, 2005</i>												
<b>Mapping of CO and PO</b>													
	<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>
	CO1	H	L	H	L	M		M			L		
	CO2	H		H	L	M		M	L		L		
	CO3	H	L	H	L	M		M			L		

**B. Com (Analytics)**  
**Course Structure**  
**Semester II**

<b>Course Code</b>	<b>Title of the Course</b>	<b>Category</b>	<b>Lecture Hours per week</b>	<b>Credits</b>
C5 24 GE 201	General English	Language 1	3	3
C5 24 KN 201	Kannada	Language 2	3	3
C5 24 HN 201	Hindi			
C5 24 AE 201	Additional English			
C5 24 MC 201	Corporate Accounting	Major Core	4	4
C5 24 MC 202	Business StatisticsII	Major Core	4	4
C5 24 MC 203	Business Economics	Major Core	4	4
C5 24 MC 204	Business Law	Major Core	4	4
UG 24 SB XXX	MOOCs / Certificate Course	Skill Based Course		1
UG 24 VB XXX	Extracurricular Activities	Value Based Activities		1
UG 24 CC 201	Constitutional Values II	Compulsory course	2	2
<b>Total credits</b>				<b>26</b>

Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
II	C5 24 MC 201	Corporate Accounting	60 Hours	Major Core	4	4
<b>Course Objectives</b>	The course is designed keeping in view the awareness level requirement of students with regard to Corporate Accounting concepts and techniques.					
<b>Course Outcomes:</b>					<b>T Levels</b>	
CO1	Construct the financial statements of company as per the frame work of Ind AS.					T5
CO2	Devise a plan for Redemption of Preference shares.					T5
CO3	Reconstruct the capital structure of financial statement of Joint stock company ltd. after making necessary in connection with internal reconstruction.					T5
CO4	Construct the Balance sheet after making necessary in connection with Amalgamation.					T5
CO5	Construct the Balance sheet after making necessary in connection with Absorption.					T5
CO6	Construct the Balance sheet after making necessary in connection with external re- construction.					T5
<b>Module 1</b>	<b>Preparation and Presentation of Financial Statements</b>					<b>20 Hours</b>
Preparation and Presentation of Financial Statements as per Ind AS Schedule III (Excluding Consolidated Financial Statement) Overall Comprehensive Income, Changes in Equity, Cash Flow, Profit & Loss Statement, Balance Sheet. Treatment of Special Items - Depreciation calculated as per Schedule II, Interest on Debentures, Provision for Tax, Dividends-Interim dividend, final dividend, Unclaimed Dividend, Corporate Dividend Tax. Organisation for Economic Cooperation and Development (OECD) - Principles of Corporate Governance - Six principles (concept only) - Global Reporting Initiative (GRI) - Sustainability reporting in preparation and presentation of financial statements.						
<b>Module 2</b>	<b>Redemption of Preference Shares</b>					<b>10 Hours</b>
Meaning, Legal provisions as per section 55 of Companies Act 2013, Treatment of Premium received on issue of shares Section 52, Creation of Capital Redemption Reserve (CRR) , Fresh issue shares, Arranging for cash balance for the purpose of redemption (Use of Equation for finding out minimum or sufficient number of shares to be issued to the public at the time of redemption of preference shares) Minimum number of shares to be issued for redemption, Issue of Bonus shares by using CRR account, Basics of Buy Back of Shares.						
<b>Module 3</b>	<b>Internal Reconstruction - Capital Reduction</b>					<b>10 Hours</b>
Meaning, Objective, Procedure, Form of Reduction, Reorganisation through surrender of Shares, Subdivision and consolidation of shares, Materialisation of Contingent Liability						
<b>Module 4</b>	<b>Amalgamation</b>					<b>10 Hours</b>

Meaning of Amalgamation, Types of Amalgamation, Merger and Purchase, Calculation of Purchase Consideration, Accounting entries in the books of Selling or Vendor Company, Ledgeraccounts in the books of Selling Company, Journal entries in the books of buying company and  
Preparation of Opening Balance sheet of the Amalgamated Company, Calculation of Goodwill or Capital Reserve. Treatment of Intercompany debts, Intercompany Owings, Unrealised Profits,

Discharge of Debentures, Discharge of debenture holders to get same amount of interest in spite of change in rate of interest, Issue of new shares to raise additional capital.

<b>Module 5</b>	<b>Absorption</b>	<b>6 Hours</b>
-----------------	-------------------	----------------

Absorption According to Ind AS 103. Forms of Purchase consideration - Deferred and Contingent consideration. Accounting Entries in the Books of Selling or Vendor Company, Ledger accounts in the books of Selling company, Journal entries in the books of Buying Company and preparation of Balance Sheet of the buying company, Calculation of Goodwill or Capital Reserve, Treatment of - Intercompany debts, Intercompany Owings, Unrealised Profits, Discharge of debentures, Discharge of debenture holders to get same amount of interest

<b>Module 6</b>	<b>External Reconstruction</b>	<b>4 Hours</b>
-----------------	--------------------------------	----------------

Reconstruction According to Ind AS 103. Meaning - Accounting in the books of Transferor Company. Accounting in the books of Transferee (based on relevant accounting standard); intercompany transactions (excluding inter-company share-holding).

**Skill Development:**

*(These activities are only indicative, the Faculty member can innovate)*

1	Prepare the Depreciation Schedule II of Companies Act with imaginary figures.
2	Prepare a report for a case of mergers or acquisitions. State the reasons why the firms decided to do so and the benefits derived by both companies.
3	Analyse any 5 cases of amalgamations/ absorption of Joint stock companies with a brief description of each case - name of purchasing & selling companies, nature of merger/absorption and purchase consideration.
4	Analyse the impact of covid on published financial statements by comparing the statements before and after the pandemic.
5	Identify from a published annual report the disclosures regarding acquisition, purchase consideration, nature of acquisition etc.
6	Present the depreciation table, asset register from an annual report.

**Book for Reference:**

1	<i>Jain, S. P., &amp; Narang, K. L. (2022). Advanced Accounts (12th ed.). Kalyani Publishers.</i>
2	<i>Maheshwari, S. N. (2021). Advanced Corporate Accounting (3rd ed.). Sultan Chand &amp; Sons.</i>
3	<i>Sehgal, A., &amp; Sehgal, D. (2022). Advanced Accounting: Corporate Accounting (1st ed.). Taxmann Publications.</i>
4	<i>Singhal, S., &amp; Shankaraiah, R. (2021). Manual of Financial Accounting and Reporting. CCH India.</i>
5	<i>Gupta, R. L., &amp; Grewal, J. (2021). Advanced Accounts (4th ed.). Sultan Chand &amp; Sons.</i>
6	<i>Shukla, M. C. (2022). Advanced Accounts (14th ed.). Sultan Chand &amp; Sons.</i>

**Mapping of CO and PO**

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M	H	L	H			L		L	M		M
CO2	M		H	H	L		L		L	M		M
CO3	M		H	H	L		L		L	M		M
CO4	M	H	L	H			L		L	M		M
CO5	M	H	L	H			L		L	M		M
CO6	M		H	H	L		L		L	M	L	M



Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
II	C5 24 MC 202	Business Statistics II	60 Hours	Major Core	4	4
<b>Course Objectives</b>	This course aims to equip students with a comprehensive understanding of probability and its critical role in business transactions, including the identification of relevant probability distributions for assessing the likelihood of outcomes. Students will learn to apply hypothesis testing methods for single and two means, as well as justify the use of advanced statistical techniques like Chi-Square Test and ANOVA for different business scenarios. Additionally, the course will explore the applications of correlation and regression analysis to determine and analyze relationships between multiple variables, thereby enhancing decision-making capabilities in a business context.					
<b>Course Outcomes</b>						<b>T Levels</b>
CO1	Illustrate the scope of Probability and its application for determination of certainty of possible outcome of event in the context of business transactions.					T3
CO2	Determine the type of probability distribution on the basis of possible outcome of Business event.					T4
CO3	Use the appropriate test of hypothesis for single mean and two means.					T3
CO4	Justify the application of Chi - Square Test for testing of hypothesis in accordance with merit of the case.					T5
CO5	Examine the applicability and implication of correlation analysis in determining the relationship between two or more variables.					T4
CO6	Examine the applicability and implication of regression analysis in determining the cause and effect relationship between two or more variables.					T4
<b>Module 1</b>	<b>Introduction to Probability</b>					<b>10 Hours</b>
Importance and Definition of Probability - Random Variable- Sample Space - Favourable Events - Mutually Exclusive Events - Dependent and Independent Events - Addition, and Multiplication Theorem of Probability - Conditional Probability - (simple application illustrations).						
<b>Module 2</b>	<b>Probability Distributions</b>					<b>15 Hours</b>
Binomial Distribution (meaning and importance) and its Probability Function - Poisson Distribution (meaning and importance) and probability function (simple application problems). Normal Distribution (meaning and importance) - Probability Density Function of Normal Distribution - Standard Normal Distribution and its applications (simple application illustrations).						
<b>Module 3</b>	<b>Parametric Tests</b>					<b>13 Hours</b>
Meaning and Importance of Hypothesis - Formation of Null and Alternative Hypothesis - Level of Significance - Level of Confidence - Type I and Type II Errors - Hypothesis Testing: t-test, z-test, test for Single Mean and Test for Difference Between Two Means and One way ANOVA.						

<b>Module 4</b>	<b>Non-Parametric Tests</b>											<b>7 Hours</b>	
Chi-square test - Importance - Conditions for Chi-square Test and applications problems - Degrees of Freedom - Contingency Table (simple application illustrations)													
<b>Module 5</b>	<b>Correlation Analysis</b>											<b>7 Hours</b>	
Meaning - Definition - Uses of Correlation - Types of Correlation - Scatter Diagram - Karl Pearson's correlation coefficient - Spearman's Rank Correlation - Probable error.													
<b>Module 6</b>	<b>Regression Analysis</b>											<b>8 Hours</b>	
Regression - Meaning and utility of Regression Analysis - Regression lines - Multiple Linear Regression - Fitting multiple linear regression models (involving two regressions)-Prediction-Regression coefficients and Coefficient of Determination.													
<b>Skill Development:</b> (These activities are only indicative, the Faculty member can innovate)													
1	Identify the type of probability distribution based on possible outcome of Business event.												
2	Compute Correlation and Regression for identifying the useful drivers of a particular driven phenomenon using tools available in MS Excel.												
3	Present business data using scatter plot for identifying direction and magnitude of the connect between two phenomena.												
4	Understanding of occurrence of happening of an event and its distribution in different business scenarios.												
5	Testing of hypothesised population parameter and present the testing results based on evidence thrown by sample statistic.												
<b>Book for Reference:</b>													
1	<i>Croxtan, F. E., Cowden, D. J., &amp; Kelin, S. (2021). Applied General Statistics (2nd ed.). Prentice-Hall of India.</i>												
2	<i>Black, K. (2022). Business Statistics (8th ed.). Wiley.</i>												
3	<i>Gupta, S. C., &amp; Kapoor, V. K. (2021). Fundamentals of Mathematical Statistics (11th ed.). Sultan Chand &amp; Sons.</i>												
4	<i>Veerarajan, T. (2020). Probability, Statistics and Random Processes (4th ed.). Tata McGraw-Hill Education.</i>												
5	<i>Sharma, J. K. (2021). Business Statistics (4th ed.). Pearson Education India.</i>												
6	<i>Bajpai, N. (2022). Business Statistics (3rd ed.). Pearson Education India.</i>												
<b>Mapping of CO and PO</b>													
	<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>
	CO1	CO1	H	L	L	M	L						H
	CO2	CO2	H	L	L	M	L						H
	CO3	CO3	H	L	L	M	L						H
	CO4	CO4	H	L	L	M	L						H
	CO5	CO5	H	L	L	M	L						H
	CO6	CO6	H	L	L	M	L						H

Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
II	C5 24 MC 203	Business Economics	60 Hours	Major Core	4	4
<b>Course Objectives</b>	The objective of this course is to familiarise students with the fundamental Concepts of economics and its applicability to business environment.					
<b>Course Outcomes</b>						<b>T Levels</b>
CO1	Explain the Meaning, scope of Business economics and role of Business economists in the context of Business decisions.					T2
CO2	Illustrate the range of approaches to the study of consumer behavior and its implications.					T3
CO3	Examine the law of demand and its implications on demand conditions and price elasticities for forecasting demand of product or service.					T4
CO4	Examine the law of supply and its implications on production function for determination of output.					T4
CO5	Compare and contrast the type of market structure and its implications on Pricing and Output decisions.					T4
CO6	Describe the change of conditions of Business Cycles and its implications on Monetary and Fiscal policy with business decisionmaking.					T2
<b>Module 1</b>	<b>Business Economics</b>					<b>4 Hours</b>
Meaning- Definitions - Characteristics-Scope of Business Economics - Uses and Objectives of Business Economics-goals of business - Micro & Macro Economics.						
<b>Module 2</b>	<b>Consumer Behaviour</b>					<b>15 Hours</b>
Approaches to the Study of Consumer Behaviour-Cardinal Approach-Law of Equi-Marginal Utility - Ordinal Approach - Indifference Curve Analysis - Properties - Consumer Surplus: Meaning - Analysis - Limitations- Consumer Sovereignty - Limitations.						
<b>Module 3</b>	<b>Theory of Demand and Analysis</b>					<b>15 Hours</b>
Demand-Demand Determinants-Law of Demand-Characteristics- Exceptions- Elasticity of Demand - Price Elasticity - Types - Determining Factors-Change in Demand and Elasticity of Demand- Business Applications of Price Elasticity- Concepts of Income and Cross Elasticity of Demand - Price Elasticity of Demand Measurement By Total Outlay Method including mathematical problems- Survey of buyer's intention - Collective opinion - Trend projection -Economic Indicator. Demand forecasting methods for a new product including mathematical problems.						
<b>Module 4</b>	<b>Production Function</b>					<b>8 Hours</b>
Law of Supply-Meaning-Determinants of Supply. Production Function: Equilibrium Though Isoquants and Isocosts -Types of Cost- relationship between different types of costs and breakeven analysis.						

<b>Module 5</b>	<b>Market Structure</b>											<b>12 Hours</b>
Perfect Competition–Features–Price and Output Determination–Influence of Time Element on Price and Output–Monopoly– Features– Price and Output Determination–Price Discrimination– Price Output Determination Under Discriminating Monopoly. Monopolistic Competition–Features–Price and Output Determination in Short Run and in Industry – Features of Duopoly and Oligopoly												
<b>Module 6</b>	<b>Business Cycles</b>											<b>6 Hours</b>
Business Cycles–Phases of Business cycle–Effects of Business Cycle– Multiplier and accelerator theory – Keynesian theory- Measures to control the Business cycle–Monetary and Fiscal policy- Inflation–Causes and Measures.												
<b>Skill Development:</b> (These activities are only indicative, the Faculty member can innovate)												
1	Draft a diagrammatic representation of inflation rates for specific products using secondary data from websites											
2	Analyse and report the case studies that will have impact on business decision-making in each chapter.											
3	Conduct a survey report on the demand forecasting for a product.											
4	Choose a product and apply price elasticity in real market conditions.											
5	Prepare detailed charts on Consumer Surplus.											
6	Conduct minor survey to understand the consumption and saving pattern of consumers in the last two years											
<b>Book for Reference:</b>												
1	<i>Mithani, D. M. (2021). Business Economics (2nd ed.). Himalaya Publishing House.</i>											
2	<i>Reddy, P. N., &amp; Appanaiah, H. R. (2021). Essentials of Business Economics (2nd ed.). Penram International Publishing.</i>											
3	<i>Agarwal, S. (2022). Business Economics (3rd ed.). Taxmann Publications.</i>											
4	<i>Varshney, R. L., &amp; Maheshwari, K. (2021). Managerial Economics (2nd ed.). Sultan Chand &amp; Sons.</i>											
5	<i>Seth, M. L. (2021). Textbook of Economic Theory (2nd ed.). Chand S Publications.</i>											
6	<i>Reddy, G. S., &amp; Reddy, M. S. (2021). Business Economics (2nd ed.). Vikas Publishing House.</i>											
<b>Mapping of CO and PO</b>												
<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>
CO1	H	H	M	M	L	L					L	
CO2	H	H	M	M	L	L					L	
CO3	H	L	M	M	L	H					L	
CO4	H	L	M	M	L	L						
CO5	H	H	M	M	L	L					L	
CO6	H	H		M	L	L					L	

Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
II	C5 24 MC 204	Business Law	60 Hours	Major Core	4	4
<b>Course Objectives</b>	The course is designed keeping in view the knowledge required for mercantile and global law and their redressal mechanism.					
<b>Course Outcomes</b>						<b>T Levels</b>
CO1	Explain the scope of Business Law and its implication on various Business transactions.					T2
CO2	Illustrate the legal framework of Indian Contract Act and its essentials for making a valid contract.					T3
CO3	Examine the legal framework of Sale of Goods Act 1935 and its essentials for effecting a transfer of ownership.					T5
CO4	Examine the legal framework of Intellectual Property Legislation and its essentials for obtaining Intellectual Property Rights.					T4
CO5	Examine the provisions of Consumer Protection Act and its practice Relating to consumer protection.					T5
CO6	Examine the provisions of Cyber Laws 1999 pertaining to piracy and related offences and the Global legal system and its implication on formation, constitution and Governance of Business organization at global level.					T5
<b>Module 1</b>	<b>Jurisprudence and Scope</b>					<b>4 Hours</b>
Introduction to Law - Classification of law - Hierarchy of Courts - Brief of procedure in Courts. Meaning and Scope of business law - Sources of Indian business law.						
<b>Module 2</b>	<b>Indian Contract Act of 1872</b>					<b>22 Hours</b>
Definition - Types of contract - Essentials - Offer - Acceptance - Consideration Capacity of parties - Free consent- Legality of object and consideration - Various modes of discharge of a contract - Remedies for breach of contract.						
<b>Module 3</b>	<b>Sale of Goods Act 1930</b>					<b>8 Hours</b>
Law of Sale of Goods - Conditions and Warranties - Transfer of ownership - Performance of contracts - Remedial measures.						
<b>Module 4</b>	<b>Intellectual Property Legislations</b>					<b>8 Hours</b>
Meaning and scope of Intellectual Properties - Patent Act of 1970 and amendments as per WTO agreements: Background - Objectives - Definition - Inventions - Patentee - True and first inventor - Procedure for grant of Process and Product Patents - WTO rules as to Patents (in brief) - Rights to patentee - Infringement - Remedies.						
<b>Module 5</b>	<b>Consumer Protection Act [COPRA]</b>					<b>8 Hours</b>
Background - Definition - Consumer, Consumer Dispute, Complaint, Deficiency, Service - Consumer Protection Council - Consumer Redressal Agencies - District Forum - State Commission and National Commission. Key highlights of the Consumer Protection Act, 2019 Impact of unethical practices in selling and consumption like adulteration, hoarding, black marketing, on the achievement of SDG-3 (good health and well-being) and SDG-12						

(Responsibleconsumption and production)

Module 6		Cyber Laws 1999 and Global Law										10 Hours	
<p>Information Technology Act, 2000 - Objectives – Definitions and salient features – Provisions pertaining to piracy and related offences and penalties.</p> <p>Essential elements of legal systems- Business, political and International legalregulation and conflicts of laws Formation and constitution of business organizations -Agency law, Partnerships, corporations and legal personality, insolvency law and administration. Governance and ethical issues relating to business – Corporate fraudulent behaviour.</p> <p>Behavioral ethics and justice: - Relationship between justice perceptions in employees and comparison of ethical and unethical behaviors like violation of conscience, failure to honor commitments, unlawful conduct, disregard of company law</p>													
<b>Skill Development:</b>													
1	Analyse and prepare a report on the importance of Bankruptcy law.												
2	Draft a 'rent agreement' incorporating all the essential features of a valid agreement												
3	Draft an agreement to repay a loan borrowed from a bank on installmentbasis.												
4	Analyse and prepare a report on Case laws 'involving points of law of contracts'												
5	Draft a complaint against 'unfair trade practice' adopted by a businessman, to the consumer forum.												
6	Prepare a report on the latest cases of both High Court and Supreme Court on Environmental issues with both facts and judgements [at least 2 cases].												
7	Analyse and discuss examples of violation of Cyber Laws												
8	Make a visit to the nearby Civil court, and present your observations of a case attended to the class												
9	Develop Mock Court scenario in the class to present a latest popular case from the consumer court												
10	Prepare and discuss the role and importance of Limited Liability Partnership in class.												
<b>Book for Reference:</b>													
1	<i>Singh, A. (2022). Business Law (6th ed.). Pearson India.</i>												
2	<i>Tuli, P. (2021). Business Law: Text and Cases (2nd ed.). McGraw-Hill Education.</i>												
3	<i>Ashwathappa, K. (2021). Business Law (3rd ed.). Himalaya Publishing House.</i>												
4	<i>Sen, S. (2020). Business law: Text and Cases (3rd ed.). Cengage Learning India.</i>												
5	<i>Kapoor, N. D. (2021). Business Law (4th ed.). Sultan Chand &amp; Sons.</i>												
6	<i>Maheshwari, S. K. (2020). Business Law (2nd ed.). Vikas Publishing House.</i>												
<b>Mapping of CO and PO</b>													
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO1	H	H	L	M	M			L		L			
CO2	H	H	L	M	M			L		L			
CO3	H	H	L	M	M			L		L			
CO4	H	L		M	H			L		L			
CO5	H	L		M	H			M		L			
CO6	H	L	L	M	H			M		L			

Department of Commerce B. Com (Analytics)						
Semester	Course Code	Course Title	Course Duration	Course Type	Teaching Hours Per week	Credits
II	UG 24 CC 201	Constitutional Values II	30 Hours	Compulsory Courses	2	2
<b>Course Objectives :</b>	This course aims to provide an proper understanding of state legislature, executive and High Court. Students will explore key constitutional provisions, debates, and contemporary issues to critically analyze the impact of constitution on governance and social equity.					
<b>Course Outcomes</b>						<b>T Levels</b>
CO1	Analyze the role of decentralization and cooperative federalism in strengthening the Indian political system.					T4
CO2	Discuss the effectiveness of constitutional provisions and affirmative actions in promoting social welfare, equality, and protection of vulnerable groups.					T2
CO3	Demonstrate the powers and functions of Election Commission in India.					T2
<b>Module 1</b>	<b>State Legislature and State Executive</b>					<b>10 Hours</b>
State Legislature - Vidhana Sabha, Vidhana Parishath, Composition, powers and functions - State Executive - Governor, Chief Minister, State Council of Ministry, powers and functions - Centre-State Relations, Cooperative Federalism and Its Challenges						
<b>Module 2</b>	<b>Democratic Decentralisation</b>					<b>10 Hours</b>
Democratic Decentralization; Local Self-Government, Urban Governments - 73rd and 74th Constitutional amendments, contemporary challenges - Constitutional Amendment Procedure in India; Simple, Special and Special with Concurrence of States - Basic Structure of Indian Constitution with special reference to Keshavananda Bharathi Case						
<b>Module 3</b>	<b>Election Commission of India</b>					<b>10 Hours</b>
Election Commission of India; Composition, Powers and Functions - Public Service Commissions; UPSC and State Public Service Commission - Affirmative Action; Reservation for SC/ST(23%), OBC(27%), EWC(10%) and Women(33% Reservation within)It's Relevance.						
<b>Skill Development:</b>						
1	Make a chart of State Legislature structure and identify the people holding different profiles.					
2	Analyse any of the election process conducted in the previous years and present your observations.					
3	Study the Keshava Nanda case and make a report and also present it in the class with your observations.					
<b>Book for Reference:</b>						
1	<i>Ambedkar, B. R. (1948), The Constitution of India, Government of India.</i>					
2	<i>Basu, D. D. (2018). Introduction to the Constitution of India, LexisNexis.</i>					
3	<i>Austin, G. (1999). The Indian Constitution: Cornerstone of a Nation, Oxford University Press.</i>					
4	<i>Sharma, B. K. (2021). Introduction to the Constitution of India. Prentice Hall.</i>					



5	<i>Singh, M. P., &amp; Saxena, R. (2008). Indian Politics: Constitutional Foundations and Institutional Functioning. PHI Learning.</i>
6	<i>Khosla, M. (2012). The Indian Constitution, Oxford University Press</i>

**Mapping of CO and PO**

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	L	H	L	M		M			L		
CO2	H		H	L	M		M	L		L		
CO3	H	L	H	L	M		M			L		

