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**Janata Shikshan Sangha's**  
**SHREE TAMMANNAPPA CHIKKODI**  
**ARTS, COMMERCE, BBA, BCA & B. Sc College ,**  
**PG COLLEGE & Research Centre, BANHATTI.**  
**(Affiliated to Rani Channamma University Belagavi)**

Tal:Rabkavi-Banahatti)

Karnataka

(Dist: Bagalkot

Re-Accredited by NAAC at "B++" Level

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**PROGRAM OUTCOMES**  
**PROGRAM SPECIFIC OUTCOMES**  
**AND**  
**COURSE OUTCOMES**  
**(PO'S, PSO'S & CO'S)**

2022 - 2023

## DEPARTMENT OF COMMERCE COURSE OUTCOMES

### FOR THE YEAR 2022-23

CLASS	COURSE CODE	COURSE	COURSE OUTCOMES
Bcom I Sem	B.Com. 1.1	FINANCIAL ACCOUNTING	<ol style="list-style-type: none"><li>1. Understand the theoretical framework of accounting as well as accounting standards.</li><li>2. Demonstrate the preparation of financial statement of manufacturing and non-manufacturing entities of sole proprietors.</li><li>3. Exercise the accounting treatments for consignment transactions &amp; events in the books of consignor and consignee.</li><li>4. Understand the accounting treatment for royalty transactions &amp; articulate the Royalty agreements.</li><li>5. Outline the emerging trends in the field of accounting.</li></ol>
Bcom I Sem	B.Com. 1.2	MANAGEMENT PRINCIPLES AND APPLICATIONS	<ol style="list-style-type: none"><li>1. Understand and identify the different theories of organisations, which are relevant in the present context.</li><li>2. Design and demonstrate the strategic plan for the attainment of organisational goals.</li><li>3. Differentiate the different types of authority and choose the best one in the present context.</li><li>4. Compare and choose the different types of motivation factors and leadership styles.</li><li>5. Choose the best controlling techniques for better productivity of an organisation.</li></ol>
Bcom I Sem	B.Com. 1.3	PRINCIPLES OF MARKETING	<ol style="list-style-type: none"><li>1. Understand the basic concepts of marketing and assess the marketing environment.</li></ol>

			<p>2. Analyse the consumer behaviour in the present scenario and marketing segmentation.</p> <p>3. Discover the new product development &amp; identify the factors affecting the price of a product in the present context.</p> <p>4. Judge the impact of promotional techniques on the customers &amp; importance of channels of distribution.</p> <p>5. Outline the recent developments in the field of marketing.</p>
Bcom III Sem	B.Com.3.1	Corporate Accounting	<p>a) Understand the treatment of underwriting of shares.</p> <p>b) Comprehend the computation of profit prior to incorporation.</p> <p>c) Know the valuation of intangible assets.</p> <p>d) Know the valuation of shares.</p> <p>e) Prepare the financial statements of companies as per companies act, 2013.</p>
Bcom III Sem	B.Com.3.2	Business Statistics	<p>a. Familiarizes statistical data and descriptive statistics for business decision-making.</p> <p>b. Comprehend the measures of variation and measures of skewness.</p> <p>c. Demonstrate the use of probability and probability distributions in business.</p> <p>d. Validate the application of correlation and regression in business decisions.</p> <p>e. Show the use of index numbers in business.</p>
Bcom III Sem	B.Com.3.3	Cost Accounting	<p>a) Understand concepts of cost accounting &amp; Methods of Costing.</p> <p>b) Outline the Procedure and documentations involved in procurement of materials &amp; compute the valuation of Inventory.</p> <p>c) Make use of payroll procedures &amp; compute idle and over time.</p> <p>d) Discuss the methods of allocation,</p>



			apportionment & absorption of overheads. e) Prepare cost sheet & discuss cost allocation under ABC.
Bcom III Sem	B.Com.3.4	Financial Education and Investment Awareness	<ol style="list-style-type: none"> <li>1. Provide the foundations for financial decision making</li> <li>2. List out various saving and investment alternatives available for a common man</li> <li>3. Give a detailed overview of stock markets and stock selection.</li> <li>4. Orient the learners about mutual funds and the criteria for selection.</li> </ol>
Bcom V Sem	DSC-5.1	MANAGEMENT ACCOUNTING	The objective of this course is to enable the students to understand the analysis and interpretation of financial statements with a view to prepare management reports for decision making
Bcom V Sem	DSC-5.2	INCOME TAX-I	The objective of this course is to expose the students to the various provisions of Income Tax Act relating to computation of Income of individual assesses.
Bcom V Sem	DSC-5.3	COST ACCOUNTING	The objective of this course is to familiarize the students with the cost accounting concepts and their applicability in organizations for the purpose of decision making on cost reduction and efficiency improvement.
Bcom V Sem	DSC-5.4	INDIAN ACCOUNTING STANDARDS	The objective of the subject is to enable the students to understand the need and method of presentation of financial statements in accordance with IFRS, which makes the students to acquire knowledge about various IndAS.
Bcom V Sem	DSCAT-5.5	ACCOUNTING FOR MANAGERIAL DECISIONS	To develop among learners, an understanding of the various tools and techniques for controlling and reducing cost, and enable effective decision making.
Bcom V Sem	DSCAT - 5.6	GOODS AND SERVICE TAX	To impart students with knowledge of tax, types and their modalities, to give insight on the taxes influencing

			a corporate entity – both direct and indirect, and to orient the students on the procedures and formalities to be adhered, with regard to tax matters.
Bcom V Sem	SEC-5.7	COMMUNITY SERVICES	To enable the students' to learn and develop the skills by involving in the community services.

**DEPARTMENT OF COMMERCE COURSE OUTCOMES FOR THE YEAR 2022-23**

CLASS	COURSE CODE	COURSE	COURSE OUTCOMES
Bcom II Sem	B.Com. 2.1	ADVANCED FINANCIAL ACCOUNTING	<p>Course Outcomes: On successful completion of the course, the Students will be able to</p> <ol style="list-style-type: none"> <li>1. Learn various methods of accounting for hire purchase transactions.</li> <li>2. Deal with the inter-departmental transfers and their accounting treatment.</li> <li>3. Demonstrate various accounting treatments for dependent &amp; independent branches.</li> <li>4. Prepare financial statements from incomplete records.</li> </ol>
Bcom II Sem	B.Com. 2.2	BUSINESS MATHEMATICS	<p>Course Outcomes: On successful completion of the course, the Students will be able to</p> <ol style="list-style-type: none"> <li>1. Understand the number system and indices applications in solving basic business problems.</li> <li>2. Apply concept of commercial arithmetic concepts to solve business problems.</li> <li>3. Make use of theory of equation in solving the business problems in the present context.</li> <li>4. Understand and apply the concepts of Set Theory, Permutations &amp; Combinations and Matrices solving business problems.</li> <li>5. Apply measurement of solids in solving simple business problems.</li> </ol>
Bcom II	B.Com. 2.2	CORPORATE	Course Outcomes: On successful



Sem		ADMINISTRATION	<p>completion of the course, the Students will be able to</p> <ol style="list-style-type: none"> <li>1. Understand the framework of Companies Act of 2013 and different kind of companies.</li> <li>2. Identify the stages and documents involved in the formation of companies in India.</li> <li>3. Analyse the role, responsibilities and functions of Key management Personnel in Corporate Administration.</li> <li>4. Examine the procedure involved in the corporate meeting and the role of company secretary in the meeting.</li> <li>5. Evaluate the role of liquidator in the process of winding up of the company.</li> </ol>
Bcom II Sem	B.Com. 2.3	LAW AND PRACTICE OF BANKING	<p>Course Outcomes: On successful completion of the course, the Students will be able to</p> <ol style="list-style-type: none"> <li>1. Summarize the relationship between Banker &amp; customer and different types of functions of banker.</li> <li>2. Analyse the role, functions and duties of paying and collecting banker.</li> <li>3. Make use of the procedure involved in opening and operating different accounts.</li> <li>4. Examine the different types of negotiable instrument &amp; their relevance in the present context.</li> <li>5. Estimate possible developments in the banking sector in the upcoming days.</li> </ol>
Bcom IV Sem	B.Com. 4.1	Advanced Corporate Accounting	<p>Course Outcomes: On successful completion of the course, the Students will be able to</p> <ol style="list-style-type: none"> <li>a) Know the procedure of redemption of preference shares.</li> <li>b) Comprehend the different methods of Mergers and Acquisition of Companies</li> <li>c) Understand the process of internal</li> </ol>

			reconstruction. d) Prepare the liquidators final statement of accounts. e) Understand the recent developments in accounting and accounting standards.
Bcom IV Sem	B.Com. 4.2	Costing Methods and Techniques	Course Outcomes: On successful completion of the course, the Students will be able to a) The method of costing applicable in different industries. b) Determination of cost by applying different methods of costing. c) Prepare flexible and cash budget with imaginary figures d) Analyse the processes involved in standard costing. e) Familiarize with the Activity Based Costing and its applications.
Bcom IV Sem	B.Com. 4.3	Business Regulatory Framework	Course Outcomes: On successful completion of the course, the Students will be able to a) Recognize the laws relating to Contracts and its application in business activities. b) Acquire knowledge on bailment and indemnification of goods in a contractual relationship and role of agents. c) Comprehend the rules for Sale of Goods and rights and duties of a buyer and aseller. d) Distinguish the partnership laws, its applicability and relevance. e) Rephrase the cyber law in the present context.
Bcom VI Sem	DSC-6.1	PRINCIPLES AND PRACTICE OF AUDITING	This course aims at imparting knowledge about the principles and modern auditing techniques and their applications.
Bcom VI Sem	DSC-6.2	INCOME TAX-II	The Objective of this course is to make the students understand the computation of Taxable Income and Tax Liability of individual assesseees.

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Bcom VI Sem	DSC-6.3	COSTING METHODS	The learning objective is to familiarize the students on the use of cost accounting methods in different industries.
Bcom VI Sem	DSC-6.4	INDIAN FINANCIAL INSTITUTIONS AND MARKETS	The objective of this course is to help students to understand the conceptual framework of Indian financial Institutions and markets and their operations.
Bcom VI Sem	DSC-6.5	STRATEGIC COST AND PERFORMANCE MANAGEMENT	To impart knowledge on applying various cost management techniques for planning and controlling performance in order to set, monitor and control strategic objectives.
Bcom VI Sem	DSC-6.6	CORPORATE TAX PLANNING AND MANAGEMENT	To impart students with knowledge on tax, tax modalities and to orient the students on the procedures and formalities to be adhered, with regard to tax matters



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Program Outcomes of M.COM.

NAME OF THE PROGRAM	PROGRAM OUTCOMES
<b>MASTER OF COMMERCE</b>	<p>After the completion of TWO years program in Master of Commerce the students could be able to gain:</p> <ol style="list-style-type: none"><li>1. The degree leads to the comprehensive knowledge of the subject.</li><li>2. Students can write competitive examinations like UGC-NET, SLET, and M.Phil., Ph.D. and can get the job of assistant professors at colleges and universities.</li><li>3. Subject knowledge helps them to pursue their career in the field of education, translation, research, teaching, freelancing, management, creative writing, editing, banking, publication, and journalism.</li><li>4. Master Degree helps students getting through the competitive exams.</li><li>5. Know when there is a need for information, to be able to identify, locate, evaluate and effectively use that information for the issue or problem at hand.</li><li>6. Impart the students with higher level knowledge and understanding of contemporary trends in commerce and business finance.</li><li>7. Enable the students for an in depth analysis of investment, portfolio management, investment banking and liquidation of investments.</li><li>8. Facilitate the students to apply capital budgeting techniques for investment decisions.</li><li>9. Provide guidance to students to plan and undertake independent research in chosen area of knowledge</li></ol>

**COURSE OUTCOMES OF M.COM.**

<b>Semester</b>	<b>Course Code &amp; Name</b>	<b>Outcomes</b>	
M.COM. I Sem.	Advanced Marketing Management	CO1	To familiarize the students with the fundamentals of marketing including marketers perspectives
		CO2	To make the students understand the concepts of product design
		CO3	To know the implications of distribution & channel integration decisions
		CO4	Enabling the students to understand the importance and process of MIS and its usages in the organizational context
		CO5	To understand the implications of current trends in online marketing
M.COM. I Sem.	Financial Management	CO1	To acquaint the students with various methods and techniques of financial management
		CO2	Understand and analyze the capital structure and its approaches
		CO3	Students can understand evaluation of capital budgeting approaches
		CO4	Students can acquire knowledge about dividend decisions in practice with various models
		CO5	Calculation of working capital requirement and components of working capital.
M.COM. I Sem.	Strategic Management	CO1	To understand the framework across strategic analysis, strategy formulation and strategic implementation
		CO2	To study the environmental analysis and diagnosis with models
		CO3	To know the formulation of strategy and its choice



		CO4	To study the relationship between formulation and implementation of strategy
		CO5	To understand the techniques of strategic evaluation and control
<b>M.COM. I Sem.</b>	<b>Applied Economics for Business</b>	CO1	The basic understanding of managerial economics. An insight into the fundamental concepts of economics.
		CO2	Able to understand of various approaches of consumer behavior and derivation of demand accordingly.
		CO3	Able to understand and discussed the probable outcomes of concept of Production & functional relationship. Specific laws related to behavior of production, externalities.
		CO4	Able to understand the probable outcomes of concept of Costs & their functional relationship specific laws related to behavior of cost functions with simple problems.
		CO5	Able to understand and discussed the probable outcomes of various forms of market and their operations with regard to determination of price, output and existing realmarket. Able to understand the probable outcomes of various trade cycles such as depression prosperity, peak and recession.
<b>M.COM. I Sem.</b>	<b>Management Accounting</b>	CO1	Understanding about the concept of management and tools and techniques of it.
		CO2	Gain knowledge about marginal costing and break-even analysis.
		CO3	Understanding different methods of financial analysis and interpretation tools and different types of ratios.
		CO4	Acquire knowledge about preparation of fund flow statement and cash flow statement.
		CO5	Understand the techniques of uniform costing and inter firm comparison.
<b>M.COM. I Sem.</b>	<b>Stock Market Operations</b>	CO1	Understanding the overview of securities market
		CO2	Understanding role, importance and working system of primary market
		CO3	Understanding functions, members of secondary market and

			SEBI's trading mechanism.
		CO4	Understanding depository services, its types and legal framework for protecting investor's interest.
		CO5	Understanding environment of international stock exchanges, and major international stock exchanges
<b>M.COM. II Sem.</b>	<b>Corporate Restructuring</b>	CO1	To understand significant motives of Corporate restructuring
		CO2	To understand the basic issues of mergers and acquisitions
		CO3	To understand the implementation of merger and acquisition
		CO4	To understand the SEBI takeover code
		CO5	To understand the working measures for control of industrial sequence
<b>M.COM. II Sem.</b>	<b>Quantitative Techniques</b>	CO1	Understand the uses of quantitative techniques in business and industry
		CO2	Gain knowledge to optimize the objectives with limited resources by using Linear Programming Problem.
		CO3	Understand the optimum methods to reduce the transportation costs and optimum assignment of salesman.
		CO4	It explains planning, sequencing and scheduling the various activities to complete the job or project using PERT & CPM
		CO5	To acquire knowledge about decision making under different environments
<b>M.COM. II Sem.</b>	<b>Advanced Corporate Accounting</b>	CO1	To acquire knowledge about preparation of final accounts
		CO2	To understand the accounting treatment in internal and external reconstruction
		CO3	Preparation of consolidated financial statements in case of holding companies
		CO4	To understand provisions relating to buy back of shares and methods of buy back of shares.
		CO5	To understand the methods of trading in financial instruments and its presentation in the books of accounts.
<b>M.COM. II Sem.</b>	<b>Dynamics of Entrepreneurial</b>	CO1	To acquire knowledge about Entrepreneurship, Myths, school of & style of entrepreneurship.
		CO2	To understand about entrepreneurial creativity and innovation



	<b>Development</b>	CO3	To understand about new Venture & it's Approaches.
		CO4	To study about business plan
		CO5	To study about Institution fecilitating Entrepreneurship In India
<b>M.COM. III Sem.</b>	<b>Business Analytics</b>	CO1	Students re able o understand about Business Analytics , Information Technology Analytical resources of marker condition.
		CO2	Helps to study about Data management in corporate world
		CO3	It guide he students to how to guides the company for developing information strategy and Ability
		CO4	To study about application of Analytics.
		CO5	To study for Business intelligence projects.
<b>M.COM. III Sem.</b>	<b>International Financial Management</b>	CO1	Understand the International Financial Management
		CO2	To understand in depth about Foreign Exchange Methods
		CO3	To evaluate Foreign Exchange Risk Management and Economic Exposure
		CO4	To design global financing strategy.
		CO5	Determination of Capital budgeting and working capital management of MNC s
<b>M.COM. III Sem.</b>	<b>Organisational Behaviour</b>	CO1	Basic understanding about Organisational behaviour.
		CO2	Able to understand about Individual behaviour and personality.
		CO3	Get detailed knowledge f Group behavior in Organisation
		CO4	Get detailed information of Motivation and Leadership
		CO5	Helps to study Organisation change and its Approaches New organisation change and Development
<b>M.COM.</b>	<b>Financial reporting &amp; standards</b>	CO1	Helps to get knowledge about Financial Reporting and Standards
		CO2	Helps o to understanding of accounting & Reporting issues the National and international level
		CO3	Able to understand & discussed the dimensions of corporate

III Sem			Reporting
		CO4	Helps to know that reporting & need, objective & Terminologies, & Accounting policies.
		CO5	Accounting and reporting of Financial instruments in stock market, Non Banking ,company etc
M.COM. II Sem.	Accounting for Specialized Institutions	CO1	Learn the concept of insurance and provisions relating to final accounts.
		CO2	Acquire knowledge about preparation of final accounts of electricity companies.
		CO3	Students can understand legal provisions of banking companies relating to final accounts
		CO4	Students can acquire knowledge about preparation of final accounts of hotel undertakings
		CO5	Students can acquire knowledge about preparation of final accounts of hospital undertakings
M.COM. III Sem.	OEC Statistics	CO1	Understanding frequency distribution, Measure of central tendency
		CO2	Understanding about skewness and correlation
		CO3	Understanding about correlation and regression
		CO4	Understanding probability, law of probability, and law of probability
		CO5	Understanding binomial distribution, Poisson distribution and normal distribution
M.COM. IV Sem.	Financial derivatives	CO1	To acquire practical knowledge about Financial derivatives
		CO2	Helps to build knowledge about Future & Forwards in different areas.
		CO3	To understand about Options and swap.
		CO4	To understand about credit risk.
		CO5	To study about commodity & Interest rate of specific markets.
M.COM. IV Sem.	Information Technology for Business	CO1	Students will get conceptual & technical skill of ITB in business using MS- Excel
		CO2	Detailed knowledge of IF Analysis & scenario Analysis
		CO3	Understand that application of IT in functional areas



		CO4	Study about cyberspace Law and WWW
		CO5	Know about emerging technologies in Internet and Network
<b>M.COM</b> <b>IV Sem</b>	<b>Business Ethics &amp; Corporate governance</b>	CO1	Students will get conceptual knowledge about Business Ethics
		CO2	Study about Ethical Theories
		CO3	Study about Ethical dilemmas in business
		CO4	Students will acquire detailed knowledge of Corporate governance
		CO5	Earn knowledge of corporate board committees
<b>M.COM.</b> <b>IV Sem.</b>	<b>Dynamics of Entrepreneurial Development</b>	CO1	To acquire knowledge about Entrepreneurship Myths school of thought and different styles of entrepreneurship.
		CO2	To understand about entrepreneurial creativity and innovation
		CO3	To understand about New ventures & approaches
		CO4	To study about Business Plan
		CO5	To study about Institutions facilitating Entrepreneurship In India
<b>M.COM.</b> <b>IV Sem.</b>	<b>Innovation in Accounting</b>	CO1	Understand guidance note of ICAI on price level accounting.
		CO2	Acquire knowledge about valuation of human resources.
		CO3	Understand social and environmental accounting practices of Indian companies
		CO4	To acquire knowledge about accounting for intangibles and brand valuation
		CO5	To understand ethical issues involved in creative accounting and role of forensic accounting.
<b>M.COM.</b> <b>IV Sem.</b>	<b>Business Finance</b>	CO1	To understand conceptual knowledge of Behavioral Finance
		CO2	To study about foundation of Behavioral Finance
		CO3	Earn knowledge of various theories of Behavioral Finance
		CO4	Corporate finance
		CO5	To develop knowledge in Behavioral Finance emotions and

			It's role in Decision making.
<b>M.COM.</b> <b>IV Sem.</b>	<b>Project</b> <b>Report</b>	CO1	To formulate research problem statements
		CO2	Enabling the students to articulate hypothesis, objectives etc.
		CO3	To develop research design.
		CO4	To acquire knowledge about data collection, tabulation, analysis using various statistical tools
		CO5	To understand the art of research report writing.

  
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**BCA**

**COURSE**

**OUTCOMES**

2022 - 23



## BCA COURSE INFORMATION

**BCA and BCA (Hons)** are aimed at undergraduate level training facilitating multiple career paths. Students so graduated, can take up postgraduate programmes in **CS** or **MCA** leading to research as well as R&D, can be **Employable at IT industries**, or can Curriculum for BCA Program of RCUB as per NEP 2020 w.e.f. 2021-22 Page 4 of 43 pursue a **Teaching Profession** or can adopt a **Business Management Career**. BCA and BCA (Hons) aim at laying a strong foundation of computer application at an early stage of the career. There are several employment opportunities and after successful completion of BCA, graduating students can fetch employment directly in companies as programmer, Web Developer, Software Engineer, Network Administrator, Data Scientist, or AI/ML personnel.

The Program outcomes in BCA are aimed at allowing flexibility and innovation in Design and development of course content, in method of imparting training, in teaching learning process and in assessment procedures of the learning outcomes. The emphasis in BCA courses, in outcome-based curriculum framework, help students learn solving **problems, accomplishing IT tasks**, and expressing creativity, both individually and collaboratively. The proposed framework will help Students learn programming techniques and the syntax of one or more programming languages. All students must, therefore, have access to a computer with a modern programming language installed. The computer science framework does not prescribe a specific language. The teacher and students will decide which modern programming languages students will learn. More importantly, students will learn to adapt to changes in programming languages and learn new languages as they are developed.



**The present Curriculum Framework for BCA degrees is intended to facilitate the students to achieve the following.**

1.To develop an understanding and knowledge of the basic theory of Computer Science and Information Technology with good foundation on theory, systems and applications such as algorithms, data structures, data handling, data communication and computation

2.To develop the ability to use this knowledge to analyse new situations in the application domain Curriculum for BCA Program of RCUB as per NEP 2020 w.e.f. 2021-22 Page 5 of 43

3.To acquire necessary and state-of-the-art skills to take up industry challenges. The objectives and outcomes are carefully designed to suit to the abovementioned purpose.

4.The ability to synthesize the acquired knowledge, understanding and experience for a better and improved comprehension of the real-life problems

5.To learn skills and tools like mathematics, statistics and electronics to find the solution, interpret the results and make predictions for the future developments

6.To formulate, to model, to design solutions, procedure and to use software tools to solve real world problems and evaluate

## **BCA PROGRAM OUTCOMES:**

**By the end of the program the following outcomes will be achieved by the students:**

1. **Discipline knowledge:** Acquiring knowledge on basics of Computer Science and ability to apply to design principles in the development of solutions for problems of varying complexity
2. **Problem Solving:** Improved reasoning with strong mathematical ability to Identify, formulate and analyse problems related to computer science and exhibiting a sound knowledge on data structures and algorithms.
3. **Design and Development of Solutions:** Ability to design and development of algorithmic solutions to real world problems and acquiring a minimum knowledge on statistics and optimization problems. Establishing excellent skills in applying various design strategies for solving complex problems.
4. **Programming a computer:** Exhibiting strong skills required to program a computer for various issues and problems of day-to-day applications with thorough knowledge on programming languages of various levels.
5. **Application Systems Knowledge:** Possessing a sound knowledge on computer application software and ability to design and develop app for applicative problems.
6. **Modern Tool Usage:** Identify, select and use a modern scientific and IT tool or technique for modelling, prediction, data analysis and solving problems in the area of Computer Science and making them mobile based application software.



7. Communication: Must have a reasonably good communication knowledge both in oral and writing.
8. Project Management: Practicing of existing projects and becoming independent to launch own project by identifying a gap in solutions.
9. Ethics on Profession, Environment and Society: Exhibiting professional ethics to maintain the integrality in a working environment and also have concern on societal impacts due to computer-based solutions for problems. Curriculum for BCA Program of RCUB as per NEP 2020 w.e.f. 2021-22 Page 7 of 43
10. Lifelong Learning: Should become an independent learner. So, learn to learn ability.
11. Motivation to take up Higher Studies: Inspiration to continue educations towards advanced studies on Computer Science.

**By the end of the program the students will be able to:**

**The Bachelor of Computer Application (BCA (Hons))** program enables students to attain following additional attributes besides the afore-mentioned attributes, by the time of graduation:

1. Apply standard Software Engineering practices and strategies in real -time software project development
2. Design and develop computer programs/computer -based systems in the areas related to AI, algorithms, networking, web design, cloud computing, IoT and data analytics.
3. Acquaint with the contemporary trends in industrial/research settings and thereby innovate novel solutions to existing problems
4. The ability to apply the knowledge and understanding noted above to the analysis of a given information handling problem.
5. The ability to work independently on a substantial software project and as an effective team member.



# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

Learning Outcomes-Based Curriculum Framework  
(LOCF) of National Education Policy (NEP) 2020 for  
BACHELOR OF COMPUTER APPLICATIONS (BCA)

## **BCA Semester I**

Course Code: 21BCA1C2L

Course Title: Fundamentals of Computers

### **Course Outcomes:**

**At the end of the course the student should be able to:**

1. Create an awareness of computers its classification and anatomy
2. Understand Number systems, Computer Languages and the steps for problem solving
3. Understand the fundamentals of operating systems and basic commands
4. Understand basic concepts of DBMS and Internet

**Course Code: 21BCA1C1L**

**Course Title: Programming in C**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. Read, understand and trace the execution of programs written in C language
2. Apply programming control structures for a given problem to create C code
3. Understand derived datatypes and develop C code using arrays/ strings,
4. Understand user defined functions and datatypes to develop C code



**Course Code: 21BCA1C3LMF**

**Course Title: Mathematical Foundation**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. Study and solve problems related to connectives, predicates and quantifiers under different situations.
2. Develop basic knowledge of matrices and to solve equations using Cramer" rule.
3. Know the concept of Eigenvalues.
4. To develop the knowledge about derivatives and know various applications of differentiation.
5. Understand the basic concepts of Mathematical reasoning, set and functions

**Course Code: 21BCA1C3LAC**

**Course Title: Accountancy**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. Study and understand Accounting, systems of Book, Branches of accounting advantage and limitations
2. Know the concept of accounting, financial accounting process and Journalization
3. Maintenance different account book and reconciliations
4. Preparations of different bills, and trial balance



## **BCA Semester II**

**Course Code: 21BCA2C4L**

**Course Title: Data Structures using C**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. Understand the classification of data structures and dynamic memory allocation
2. Understand the difference between iteration and recursion and apply recursive definition for problem solving
3. Understand and evaluate the applications of stacks and queues
4. Understand and evaluate the applications of linked lists and tree

**Course Code: 21BCA2C5L**

**Course Title: Object Oriented Programming with JAVA**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. Understand the features of Java and the architecture of JVM
2. Write, compile, and execute Java programs that may include basic data types and control flow constructs and how type casting is done
3. Identify classes, objects, members of a class and relationships among them needed for a specific problem and demonstrate the concepts of polymorphism and inheritance
4. The students will be able to demonstrate programs based on interfaces and threads and explain the benefits of JAVA's Exceptional handling mechanism compared to other Pro Course Outcomes gamming Language
5. Write, compile, execute Java programs that include GUIs and event driven programming and programs based on files

**Course Code: 21BCA2C6L**

**Course Title: Discrete Mathematics**

**Course Outcomes:**

**At the end of the course the student should be able to:**

1. To understand the basic concepts of Mathematical reasoning, set and functions.
2. To understand various counting techniques and principle of inclusion and exclusions.
3. Understand the concepts of various types of relations, partial ordering and
4. Equivalence relations.
5. Apply the concepts of generating functions to solve the recurrence relations.
6. Familiarize the fundamental concepts of graph theory and shortest path algorithm



**Course Code: 21BCA202MPL**

**Course Title: Web Designing**

**Course Outcomes**

**At the end of the course the student should be able to:**

1. Understand the History of Internet and web Designing tools
2. Understand Markup Languages and stylesheet
3. Implement Scripting
4. Appreciate website creation

## **BCA III Semester**

**Course Title: Database Management System**

**Course code: 21BCA3C7L**

**Course Outcomes:**

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

1. Explain the various database concepts and the need for database systems.
2. Identify and define database objects, enforce integrity constraints on a database using DBMS.
3. Demonstrate a Data model and Schemas in RDBMS.
4. Identify entities and relationships and draw ER diagram for a given real-world problem.
5. Convert an ER diagram to a database schema and deduce it to the desired normal form.
6. Formulate queries in Relational Algebra, Structured Query Language (SQL) for database manipulation.
7. Explain the transaction processing and concurrency control techniques.

**Course Title: C# and Dot Net Framework**

**Course code: 21BCA3C8L**

**Course Outcomes:**

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

1. Describe Object Oriented Programming concepts like Inheritance and Polymorphism in C# programming language.
2. Interpret and Develop Interfaces for real-time applications.
3. Build custom collections and generics in C#.



**Course Title: Computer Communication and Networks**  
**Course code: 21BCA3C9L**

**Course Outcomes:**

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

1. Explain the transmission technique of digital data between two or more computers and a computer network that allows computers to exchange data.
2. Apply the basics of data communication and various types of computer networks in real world applications.
3. Compare the different layers of protocols.
4. Compare the key networking protocols and their hierarchical relationship in the conceptual model like TCP/IP and OSI.

BCA IV Semester

Course Title: Python Programming

Course code: 21BCA3C10L

Course Outcomes:

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

- 1.Explain the basic concepts of Python Programming.
- 2.Demonstrate proficiency in the handling of loops and creation of functions.
- 3.Identify the methods to create and manipulate lists, tuples and dictionaries.
- 4.Discover the commonly used operations involving file handling.
- 5.Interpret the concepts of Object-Oriented Programming as used in Python.
- 6.Develop the emerging applications of relevant fields using Python.

**Course Title: Computer Multimedia & Animation**  
**Course code: 21BCA3C11L**

**Course Outcomes:**

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

1. Write a well-designed, interactive Web site with respect to current standards and practices.
2. Demonstrate in-depth knowledge of an industry-standard multimedia development tool and its associated scripting language.
3. Determine the appropriate use of interactive versus standalone Web applications.



**Course Title: Operating System Concepts**

**Course code: 21BCA3C12L**

**Course Outcomes (COs):**

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

- 1.Explain the fundamentals of the operating system.
- 2.Comprehend multithreaded programming, process management, process synchronization, memory management and storage management.
- 3.Compare the performance of Scheduling Algorithms
- 4.Identify the features of I/O and File handling methods.

  
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(Skill Enhancement Course: SEC for BCA Course)  
**Open-Source Tools**

**Course Code: 21BCA4SE2OST**

**Course Title: Open-Source Tools**

**Course Outcomes:**

1. Recognize the benefits and features of Open-Source Technology and to interpret, contrast and compare open-source products among themselves
2. Use appropriate open-source tools based on the nature of the problem
3. Write code and compile different open-source software.

## PROGRAM OUTCOMES OF ARTS FACULTY

Program	Program Outcomes
<b>Bachelor of Arts</b>	<p>After the completion of three years Bachelor of Arts (BA) students could be able to gain:</p> <ol style="list-style-type: none"><li>1. Ethical principles and become committed to professional ethics and responsibilities.</li><li>2. Socio-scientific approach through literature enables to move forward from local to global.</li><li>3. Acquiring enhanced vocabulary makes them good communicators, civilians and patriotic.</li><li>4. Developing knowledge, analytical skills and reasoning for problem solving and decision making.</li><li>5. Communicate concepts and information clearly and in various formats (oral, visual, written, etc.)</li><li>6. Practice creative thinking and expression.</li><li>7. Collaborate respectfully with others, individually and in teams.</li></ol>

## PROGRAM SPECIFIC OUTCOMES OF THE ARTS FACULTY

Program	Program Specific Outcomes
<b>BA HISTORY</b>	<ol style="list-style-type: none"><li>1. To learn the general course of human history in multiple areas of World History.</li><li>2. Be acquainted with the range of issues related to the Indian History.</li><li>3. Think and argue historically and critically in writing and discussion.</li><li>4. Students will learn to explain how and why important events happen and change over time occurs</li><li>5. Critically recognize the Social, political, economic and cultural aspects of history.</li></ol>
<b>BA</b>	<ol style="list-style-type: none"><li>1. Enables the students to grasp the knowledge of political ideals &amp; political philosophy.</li></ol>



<b>POLITICAL SCIENCE</b>	<ol style="list-style-type: none"> <li>2. Learns about the politics of India along with constitutional structures &amp; institutions.</li> <li>3. Analyzing the Indian constitutional provisions, major legislations &amp; reforms.</li> <li>4. Building consciousness regarding national political history, International relations &amp; present Indian &amp; Western political thinkers.</li> <li>5. Examining India's foreign relations with her neighbors &amp; great powers.</li> </ol>
<b>BA ECONOMICS</b>	<p>After completion of the program, the students are able-</p> <ol style="list-style-type: none"> <li>1. To provide students a fundamental education in Economics.</li> <li>2. Acquire jobs in different sectors such as banking, industry, insurance companies, defense, planning department, CSO, NSSO etc.</li> <li>3. Pursue Post-Graduation degree in Economics, MBA, B.Ed., LLB, and Demography.</li> <li>4. Prepare and face the competitive examinations such as IES, UPSC, KPSC, Railway, and IBPS.</li> <li>5. Start own Entrepreneurship.</li> <li>6. Know the performance and status of India in World Economy.</li> </ol>
<b>BA ENGLISH</b>	<p>Students who have taken admission to B.A. with English as specific subject of study is expected to achieve following outcomes.</p> <p>They are able to</p> <ol style="list-style-type: none"> <li>1. After reading literature students can be emotive and creative to lead life. They can twist and turn the flexibility of language and make their writing fully filled with emotion and feelings.</li> <li>2. After reading various subjects, students can earn command over the subject of their choice.</li> <li>3. Students can peruse some professional courses such as B.Ed., B.PEd, LLB, MBA, and MA in the subject of their choice to make their career bright.</li> <li>4. Subject knowledge they earn helps them to pursue career in the field of education, translation, freelancing, management, creative writing, editing, banking, publication, and journalism.</li> </ol>

	5. After learning arts students can get eligibility to write competitive exams to pursue their career in defense, banking, administration, and various government departments.
<b>BA HINDI</b>	<ol style="list-style-type: none"> <li>1. Historic knowledge will help to understand the present scenario, makes them visionaries.</li> <li>2. Gains respect and identity in the society.</li> <li>3. Understand the significance of critical thinking, social interactions, economic development and sustainability.</li> <li>4. Decision making in social and economic aspects of life leads to become successful entrepreneur.</li> <li>5. Capable of progressing to post graduation or making career in various sectors like banking industry etc.</li> </ol>

### COURSE OUTCOMES

Course Outcomes of History			
Semester	Course Code & Name	Course Outcomes	
BA I Semester	C30 Ancient Indian History -I	CO1	Sources of Ancient Indian history
		CO2	Harrappan and Vedic culture
		CO3	Buddhism and Jainism
		CO4	The age of Mahajan padas and Alexander invasion
BA II Semester	C30 Ancient Indian History -II	CO1	Guptas, Samudra Guptas Political life- Sultanate administration
		CO2	Gupta culture
		CO3	Harshvardhan of Kanauj
		CO4	Pallavas of Kanchi, Cholas of Tanjore
BA III Semester	C 30 Medieval Indian History- III	CO1	Medieval Indian history
		CO2	Political life, Delhi sultanates
		CO3	Allaudin Khiliji



		CO4	Sayyid and Lodi dynasty
		CO5	Delhi sultanate culture
BA IV Semester	C30 Medieval Indian History- III	CO1	Babur the great
		CO2	Humayun and his successors
		CO3	Akbar the great
		CO4	Sayyid successors of Akbar
		CO5	Mughal administration and culture
BAV Semester	610 Modern Indian History- V	CO1	Modern Indian History- again failed to retain freedom
		CO2	Entry of Europeans. - Results of Geographical discoveries
		CO3	British French conflict-British success
		CO4	East India company Rule-establishment of east India company
		CO5	first world war of independence – it was not just sepoy mutiny
BA V Semester	610 Modern India VI	CO1	Socio religious reform movements
		CO2	Ist stage of Indian freedom movement
		CO3	II stage of Indian freedom movement
		CO4	III Stage Indian freedom movement
		CO5	III Stage Indian freedom movement
BA VI Semester	620 modern Europe VI	CO1	Geographical discoveries
		CO2	Renaissance
		CO3	Reformation
		CO4	French revolution
		CO5	American revolution
BA VI Semester	610 modern World VIII	CO1	Ist world war
		CO2	League of nation



		CO3	II World war
		CO4	United nations of organization

**Course Outcomes of Political Science**

Semester	Course Code & Name	Outcomes	
BA I Semester	A560 Political Theory	CO 1	This leads to imbibe democratic values from family to nation as a whole.
		CO 2	Students learn about government formation and functioning. They also acquire sense of rights, equality, justice and democracy.
BA II Semester	B560 Political Thought	CO 1	Political philosophical ideas boost to inculcate individual personality development.
		CO 2	Enhances civic sense among the individuals & community as a whole.
BA III Semester	C560 Indian Government & Politics	CO 1	By understanding, analyzing & implementing decentralization of power for a good governance will help to inculcate leadership qualities
		CO 2	Unity & diversity is the main basic concept of Indian Constitution & also manifesto of regional as well as national parties by this ward will be true patriot.
BA IV Semester	D560 Karnataka Government & Politics	CO 1	Knowledge of state & union together provide good governance by this local person will become a effective prime ambassador between these two.
		CO 2	Develops the ability to solve local problems without approaching higher personnel's
BA V Semester	E740 Paper I: Public Administration	CO 1	By understanding the administrative system working skills develops & better diplomatic ways to extract work from skilled persons.
BA V	E750	CO 2	This leads to comparative study of government &

Semester	Paper II: Modern Governments		politics to improve our political system.
BA VI Semester	F730 Paper I International Relations	CO 1	Students come to know about conflict & co-operation at national & International level establishing peace.
BA VI Semester	F750 Paper II Political processes & Institutions in India	CO 2	Students get actual knowledge about political processes of political system in India.

**Course Outcomes of Economics**

Semester	Course Code & Name	Outcomes	
BA I Semester	A451 Micro Economics I	CO 1	To know the basic concepts and models of economics
		CO 2	Consumer's behavior, demand analysis and demand forecasting
		CO 3	Concepts of supply and its theory
BA II Semester	B451 Micro Economics II	CO 1	Understand the concepts of cost and revenue analysis
		CO 2	Know the market structure, price and output determination
		CO 3	Learn the production function theory and equilibrium
		CO 4	Factor pricing such as rent, wage, interest and profit
BA III Semester	C451 Monetary Economics and Banking	CO 1	Understand the concepts and functions of money, supply of money
		CO 2	Value of money and theory of money
		CO 3	Know the tools of the construction of index number
		CO 4	Concept of inflation, deflation and stagflation



		CO 5	Know the working of money market, banking and financial system
BA IV Semester	D451 International Economics	CO 1	Understand theories of international trade
		CO 2	Know the foreign exchange control, BOP and BOT
		CO 3	Learn the working of international organization such as WTO, IMF, IBRD etc.
BA V Semester	E491 Paper I Macro Economics	CO 1	Understand the macro approaches to the economy
		CO 2	Learn Concepts, measurement and difficulties in calculation of National Income
		CO 3	Understand the theory of employment, multiplier and acceleration
		CO 4	Know the theory of trade cycle in the economy
	E401 Paper II Economics of Development	CO 1	Study the concept of economic development and growth
		CO 2	Understand the various theories of economic development and growth
		CO 3	Know the obstacle of economic development
		CO 4	Provide the knowledge and measure the role of different sectors in Indian economy
BA VI Semester	F491 Paper I Public Finance and Fiscal Policy	CO 1	Learn the nature, scope and importance of public finance
		CO 2	Know the various theories of public finance
		CO 3	Understand the various types of theories of taxation and expenditure
		CO 4	Know the sources of revenue of the state and federal government
		CO 5	Understand the debt, fiscal deficit concepts and theory
BA VI Semester	F501 Paper II Indian Economy	CO 1	Come out with the Knowledge of Indian economy
		CO 2	Study the structure of Indian economy, Agriculture, Industry and Demographic features
		CO 3	Study the poverty, unemployment problem and



			eradication measures
		CO 4	Study the Indian's foreign trade policies and trade relations with world
<b>Course Outcomes of English (Opt)</b>			
Semester	Course Code & Name	Outcomes	
BA I Semester (Optional)	A220 English literature of the Elizabethan Age and the Puritan Age	CO 1	If the students are of vernacular medium, they are able to compare and contrast the authors of their own language with the British counter parts.
		CO 2	Students find the similarities and differences between the growth of their mother tongue and English language.
		CO 3	Students draw inspiration from writers and attempt writing something of their own.
		CO 4	Students' attitude towards literature changes as they learn how to read and understand writings.
		CO 5	Students are able to interpret poetry, drama and other forms of writings.
BA II Semester (Optional)	B220 English literature of the Restoration Age	CO 1	Students apply their knowledge of their drama as spectator to learn more easily about dramas as learners.
		CO 2	Students learn why to use sexuality and obscenity orchestrated in dramas to play vital role in films attracting the audience nowadays too.
		CO 3	Students are able instruct young minds how sexuality and obscenity are destructive.
		CO 4	Students learn about the development of the first English dictionary and also assume what are the problems in developing dictionaries of various languages.
		CO 5	Students are capable of interpreting the social conditions of the historical significance and solve the real-life social problems effectively.
BA III	C220	CO 1	Students understand how literature can be used to arouse

Semester (Optional)	English literature of the Romantic and Victorian age		respect and love for nature.
		CO 2	Students learn introspect themselves in order to attain perfection like nature.
		CO 3	Students understand materialistic life is really perilous for our life and staying away from mechanical life can lead us to reach happy and healthy life.
		CO 4	After learning about novels, students can compare and contrast socio-economic conditions of England in order to find solutions for the problems of the country they live in.
		CO 5	Students can understand why writing fiction can be chosen as career option to attain financial assistance.
BA IV Semester (Optional)	D220 20 <sup>th</sup> Century English Literature	CO 1	Students understand what the yardsticks to earn recognition as a writer.
		CO 2	Students learn how war poetry developed the spirit of patriotism in people.
		CO 3	Students will understand how free verse changed the dimensions of poetry and it made writing poetry free of difficulties.
		CO 4	Students learn about various types of novels and they can write novels in the perspective of a country they live in.
		CO 5	Students can critically analyze how the world wars affected Indian literature which can make them to enter research in higher studies.

BA V Semester (Optional)	E230 Literary Criticism	CO 1	Students understand influences of the west on Indian literary criticism and make them produce anything new.
		CO 2	Studying literary criticism helps us to be better at playing with the sterling qualities of language.
		CO 3	Students can be critics to play a vital role of critic in producing excellent literature.
		CO 4	A literary critic can cherish and nourish a writer or he



		CO 5	Students can go on research to extract better and better out of literary criticism.
BA V Semester (Optional)	Indian English Literature E240	CO 1	Students can learn various cultures and traditions of India after studying this paper. English has been the combination all of the Indian languages.
		CO 2	Students get inspired from the Indian freedom struggle and develop spirit of patriotism. .
		CO 3	Student can be a good leader after knowing much about India through literature.
		CO 4	Students can learn how English can change their life by knowing famed writers of Indian soil
		CO 5	Students understand how they can influence people all over the world with their writings.
		BA VI Semester (Optional English)	Study of English Language and English Phonetics Age F230
CO 2	Students learn how other European languages influenced English to be rich.		
CO 3	Students are able to speak with accurate pronunciation.		
CO 4	Students are able to pursue their career in phonetics.		
CO 5	Students can be able to differentiate the phonetics of various languages.		
BA VI Semester (Optional English)	Study of Classics and Modern Literary Theories F240	CO 1	Reading classics can help a student to respect and protect his/her rich cultural heritage.
		CO 2	Students learn ethical, spiritual, and cultural values of being humans and tell someone to amend his/her attitude
		CO 3	Students learn how to write an independent literary work on a particular incident taken from a classic.
		CO 4	Students can parody a particular literary work to entertain modern audience.



		CO 5	Literary theories help readers to revolutionize present literary ideas.
		CO 2	Learn the history of Hindi language and Philology

### Course Outcomes of Kannada (OPT)

Semester	Course Code & Name	Outcomes	
B.A I Semester (Optional Kannada)	Ancient History of Kannada literature A240	CO 1	By understanding the structure, concept, usage and thinking of old Kannada literary persons, wards will have clear picture of traditional writings.
		CO 2	Influence of ancient Indian languages like Sanskrit, Prakrit and Devanagari on Kannada enriches vocabulary.
		CO 3	Students can recognize the literary meaning and colloquial meaning of words.
		CO 4	Study of prime poets of different era brings proficiency in traditional literature.
BA II Semester (Optional Kannada)	Modern history of Kannada literature B240	CO 1	Knowledge of Modern literature encourages creative literary works.
		CO 2	Dynamic nature of literature influences relevant writings.
		CO 3	Knowledge of literary trends overtime helps to overcome prejudices.
BA III Semester (Optional Kannada)	Genre of ancient Indian and Western literature C240	CO1	Features, benefits and definitions of poetry enlightsthe emotional aspects of human interaction.
		CO 2	Various thought-provoking theories kindles student's thoughts multi dimensionally.
		CO 3	Students will learn how to dramatize any type of situations into artistic scripts.
BA IV	Prosody and	CO 1	Develops descriptive and decorative writing skills

Semester (Optional Kannada)	Rhetoric in Kannada  D240	CO 2	Unique writing skill will make special identification in the field of literature.
		CO 3	Study of lyrical form of poetry helps to express emotional feelings in the shortest way.
		CO 4	Students will learn to create melodrama in colloquial language.
BA V Semester (Optional Kannada)	Kannada folk literature - paper I  E270	CO 1	Insight of Kannada folk literature helps to know regional culture, tradition, lifestyle etc.
		CO2	Devotional folk songs strengthen ethical values.
		CO3	Folk melodramas preach our students values of life and how to face difficulties in life.
		CO4	Folk literature develops down to earth behavior.
BA V Semester (Optional Kannada)	Kannada grammar and linguistic science - paper II  E280	CO 1	Better understanding of basic structure of Kannada brings syntax ability.
		CO1	Tradition grammar helps to understand old Kannada literature.
		CO3	Develops scientific approach towards language.
		CO4	By knowing distinguish features it's possible to create new vocabulary words for present demands.
		CO5	Helps to know evolution of Kannada language
BA VI Semester (Optional Kannada)	Cultural History of Karnataka- paper I  E270	CO1	Students gain historic dynasties like Kadamba, Ganga, Badami Chalukya, Hoysala and Vijay Nagar.
		CO2	Study of Bahamani sultans and administration of British in Karnataka helps to know other cultural aspects.
		CO3	Here after which starts unity in diversity is inspiration to the students to analyze present cultural trend.
		CO4	Preliminary knowledge of monuments which are very well-known like Aihole, Pattadakallu, Beluru, Halebidu and Hampi brings students to be proud of their rich heritage.



		CO5	Brief knowledge of Religions like Boudha, Jain, Veera shaiva, Islam and Christian develop secularism philosophical ideas.
BA VI Semester (Optional Kannada)	Prominent Modern Kannada Books - paper II E280	CO1	Study of 'Sanskar' a novel written by Dr.U.R.Anantmurthy helps the students to critical analyze our human society.
		CO2	Study of Kannada Drama 'Shivaraatri' written by Dr.Chandrashekar Kambar will enlightens technical skills of writing drama.
		CO3	Study of travelogue 'Pampayaatre' written by V.SitaRammayya gives he real picture of Hampi monuments which is world famous one.
		CO4	Study of 'SarovaradaSirigannadiyalli' written by Kuvempu which elaborates critical analysis of Kannada literature.



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**Course Outcomes of Political Science**

Semester	Course Code & Name	Outcomes	
BA I Semester	Political Theory	CO 1	This leads to imbibe democratic values from family to nation as a whole.
		CO 2	Students learn about government formation and functioning. They also acquire sense of rights, equality, justice and democracy.
BA II Semester	Political Thought	CO 1	Political philosophical ideas boost to inculcate individual personality development.
		CO 2	Enhances civic sense among the individuals & community as a whole.
BA III Semester	Indian Government & Politics	CO 1	By understanding, analyzing & implementing decentralization of power for a good governance will help to inculcate leadership qualities
		CO 2	Unity & diversity is the main basic concept of Indian Constitution & also manifesto of regional as well as national parties by this ward will be true patriot.
BA IV Semester	Karnataka Government & Politics	CO 1	Knowledge of state & union together provide good governance by this local person will become a effective prime ambassador between these two.
		CO 2	Develops the ability to solve local problems without approaching higher personnel's
BA V Semester	E740 Paper I: Public Administration	CO 1	By understanding the administrative system working skills develops & better diplomatic ways to extract work from skilled persons.
BA V Semester	E750 Paper II: Modern Governments	CO 2	This leads to comparative study of government & politics to improve our political system.
BA VI Semester	F730 Paper I	CO 1	Students come to know about conflict & co-operation at national & International level establishing peace.

	International Relations		
BA VI Semester	F750 Paper II Political processes & Institutions in India	CO 2	Students get actual knowledge about political processes of political system in India.

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**Course Outcomes of Economics**

<b>Semester</b>	<b>Course Code &amp; Name</b>	<b>Outcomes</b>	
BA I Semester	Micro Economics I	CO 1	To know the basic concepts and models of economics
		CO 2	Consumer's behavior, demand analysis and demand forecasting
		CO 3	Concepts of supply and its theory
BA II Semester	Micro Economics II	CO 1	Understand the concepts of cost and revenue analysis
		CO 2	Know the market structure, price and output determination
		CO 3	Learn the production function theory and equilibrium
		CO 4	Factor pricing such as rent, wage, interest and profit
BA III Semester	Monetary Economics and Banking	CO 1	Understand the concepts and functions of money, supply of money
		CO 2	Value of money and theory of money
		CO 3	Know the tools of the construction of index number
		CO 4	Concept of inflation, deflation and stagflation
		CO 5	Know the working of money market, banking and financial system
BA IV Semester	International Economics	CO 1	Understand theories of international trade
		CO 2	Know the foreign exchange control, BOP and BOT
		CO 3	Learn the working of international organization such as WTO, IMF, IBRD etc.
BA V Semester	Paper I Macro Economics	CO 1	Understand the macro approaches to the economy
		CO 2	Learn Concepts, measurement and difficulties in calculation of National Income
		CO 3	Understand the theory of employment, multiplier and acceleration
		CO 4	Know the theory of trade cycle in the economy



	Paper II Economics of Development	CO 1	Study the concept of economic development and growth
		CO 2	Understand the various theories of economic development and growth
		CO 3	Know the obstacle of economic development
		CO 4	Provide the knowledge and measure the role of different sectors in Indian economy
BA VI Semester	Paper I Public Finance and Fiscal Policy	CO 1	Learn the nature, scope and importance of public finance
		CO 2	Know the various theories of public finance
		CO 3	Understand the various types of theories of taxation and expenditure
		CO 4	Know the sources of revenue of the state and federal government
		CO 5	Understand the debt, fiscal deficit concepts and theory
BA VI Semester	Paper II Indian Economy	CO 1	Come out with the Knowledge of Indian economy
		CO 2	Study the structure of Indian economy, Agriculture, Industry and Demographic features
		CO 3	Study the poverty, unemployment problem and eradication measures
		CO 4	Study the Indian's foreign trade policies and trade relations with world



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**Course Outcomes of Kannada (OPT)**

Semester	Course Code & Name	Outcomes	
B.A I Semester (Optional Kannada)	Ancient History of Kannada literature	CO 1	By understanding the structure, concept, usage and thinking of old Kannada literary persons, wards will have clear picture of traditional writings.
		CO 2	Influence of ancient Indian languages like Sanskrit, Prakrit and Devanagari on Kannada enriches vocabulary.
		CO 3	Students can recognize the literary meaning and colloquial meaning of words.
		CO 4	Study of prime poets of different era brings proficiency in traditional literature.
BA II Semester (Optional Kannada)	Modern history of Kannada literature	CO 1	Knowledge of Modern literature encourages creative literary works.
		CO 2	Dynamic nature of literature influences relevant writings.
		CO 3	Knowledge of literary trends overtime helps to overcome prejudices.
BA III Semester (Optional Kannada)	Genre of ancient Indian and Western literature	CO1	Features, benefits and definitions of poetry enlightsthe emotional aspects of human interaction.
		CO 2	Various thought-provoking theories kindles student's thoughts multi dimensionally.
		CO 3	Students will learn how to dramatize any type of situations into artistic scripts.
BA IV Semester (Optional Kannada)	Prosody and Rhetoric in Kannada	CO 1	Develops descriptive and decorative writing skills
		CO 2	Unique writing skill will make special identification in the field of literature.
		CO 3	Study of lyrical form of poetry helps to express emotional feelings in the shortest way.



		CO 4	Students will learn to create melodrama in colloquial language.
BA V Semester (Optional Kannada)	Kannada folk literature - paper I E270	CO 1	Insight of Kannada folk literature helps to know regional culture, tradition, lifestyle etc.
		CO2	Devotional folk songs strengthen ethical values.
		CO3	Folk melodramas preach our students values of life and how to face difficulties in life.
		CO4	Folk literature develops down to earth behavior.
BA V Semester (Optional Kannada)	Kannada grammar and linguistic science - paper II E280	CO 1	Better understanding of basic structure of Kannada brings syntax ability.
		CO1	Tradition grammar helps to understand old Kannada literature.
		CO3	Develops scientific approach towards language.
		CO4	By knowing distinguish features it's possible to create new vocabulary words for present demands.
		CO5	Helps to know evolution of Kannada language
BA VI Semester (Optional Kannada)	Cultural History of Karnataka- paper I E270	CO1	Students gain historic dynasties like Kadamba, Ganga, Badami Chalukya, Hoysala and Vijay Nagar.
		CO2	Study of Bahamani sultans and administration of British in Karnataka helps to know other cultural aspects.
		CO3	Here after which starts unity in diversity is inspiration to the students to analyze present cultural trend.
		CO4	Preliminary knowledge of monuments which are very well-known like Aihole, Pattadakallu, Beluru, Halebidu and Hampi brings students to be proud of their rich heritage.
		CO5	Brief knowledge of Religions like Boudha, Jain, Veera shaiva, Islam and Christian develop secularism philosophical ideas.
BA VI Semester (Optional)	Prominent Modern Kannada	CO1	Study of 'Sanskar' a novel written by Dr.U.R.Anantmurthy helps the students to critical analyze our human society.



Kannada)	Books - paper II E280	CO2	Study of Kannada Drama 'Shivaraatri' written by Dr.Chandrashekar Kambar will enlightens technical skills of writing drama.
		CO3	Study of travelogue 'Pampayaatre' written by V.SitaRammayya gives he real picture of Hampi monuments which is world famous one.
		CO4	Study of 'SarovaradaSirigannadiyalli' written by Kuvempu which elaborates critical analysis of Kannada literature.

  
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**Course Outcomes of English (Opt)**

Semester	Course Code & Name	Outcomes	
BA I Semester (Optional)	A220 English literature of the Elizabethan Age and the Puritan Age	CO 1	If the students are of vernacular medium, they are able to compare and contrast the authors of their own language with the British counter parts.
		CO 2	Students find the similarities and differences between the growth of their mother tongue and English language.
		CO 3	Students draw inspiration from writers and attempt writing something of their own.
		CO 4	Students' attitude towards literature changes as they learn how to read and understand writings.
		CO 5	Students are able to interpret poetry, drama and other forms of writings.
BA II Semester (Optional)	B220 English literature of the Restoration Age	CO 1	Students apply their knowledge of their drama as spectator to learn more easily about dramas as learners.
		CO 2	Students learn why to use sexuality and obscenity orchestrated in dramas to play vital role in films attracting the audience nowadays too.
		CO 3	Students are able instruct young minds how sexuality and obscenity are destructive.
		CO 4	Students learn about the development of the first English dictionary and also assume what are the problems in developing dictionaries of various languages.
		CO 5	Students are capable of interpreting the social conditions of the historical significance and solve the real-life social problems effectively.
BA III Semester (Optional)	C220 English literature of the Romantic	CO 1	Students understand how literature can be used to arouse respect and love for nature.
		CO 2	Students learn introspect themselves in order to attain perfection like nature.

	and Victorian age	CO 3	Students understand materialistic life is really perilous for our life and staying away from mechanical life can lead us to reach happy and healthy life.
		CO 4	After learning about novels, students can compare and contrast socio-economic conditions of England in order to find solutions for the problems of the country they live in.
		CO 5	Students can understand why writing fiction can be chosen as career option to attain financial assistance.
BA IV Semester (Optional)	D220 20 <sup>th</sup> Century English Literature	CO 1	Students understand what the yardsticks to earn recognition as a writer.
		CO 2	Students learn how war poetry developed the spirit of patriotism in people.
		CO 3	Students will understand how free verse changed the dimensions of poetry and it made writing poetry free of difficulties.
		CO 4	Students learn about various types of novels and they can write novels in the perspective of a country they live in.
		CO 5	Students can critically analyze how the world wars affected Indian literature which can make them to enter research in higher studies.

BA V Semester (Optional)	E230 Literary Criticism	CO 1	Students understand influences of the west on Indian literary criticism and make them produce anything new.
		CO 2	Studying literary criticism helps us to be better at playing with the sterling qualities of language.
		CO 3	Students can be critics to play a vital role of critic in producing excellent literature.
		CO 4	A literary critic can cherish and nourish a writer or he can kill them too.
		CO 5	Students can go on research to extract better and better out of literary criticism.



BA V Semester (Optional)	Indian English Literature E240	CO 1	Students can learn various cultures and traditions of India after studying this paper. English has been the combination all of the Indian languages.
		CO 2	Students get inspired from the Indian freedom struggle and develop spirit of patriotism. .
		CO 3	Student can be a good leader after knowing much about India through literature.
		CO 4	Students can learn how English can change their life by knowing famed writers of Indian soil
		CO 5	Students understand how they can influence people all over the world with their writings.
BA VI Semester (Optional English)	Study of English Language and English Phonetics Age F230	CO 1	After studying the origin and growth of English language, student can be enthusiastic to see their mother tongue to explore more.
		CO 2	Students learn how other European languages influenced English to be rich.
		CO 3	Students are able to speak with accurate pronunciation.
		CO 4	Students are able to pursue their career in phonetics.
		CO 5	Students can be able to differentiate the phonetics of various languages.
BA VI Semester (Optional English)	Study of Classics and Modern Literary Theories F240	CO 1	Reading classics can help a student to respect and protect his/her rich cultural heritage.
		CO 2	Students learn ethical, spiritual, and cultural values of being humans and tell someone to amend his/her attitude
		CO 3	Students learn how to write an independent literary work on a particular incident taken from a classic.
		CO 4	Students can parody a particular literary work to entertain modern audience.
		CO 5	Literary theories help readers to revolutionize present literary ideas.

		CO 2	Learn the history of Hindi language and Philology
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Program Specific Outcomes of B.Sc.

NAME OF THE PROGRAM	PROGRAM SPECIFIC OUTCOMES
<b>B.Sc. with PHYSICS</b>	<ol style="list-style-type: none"><li>1. Educating students in the core of physics including substantial practical &amp; experimental physics, while enabling students to train in both the theoretical &amp; practical aspects.</li><li>2. Providing high quality education in physics within an environment committed to excellence in both teaching &amp; research.</li><li>3. Constructing &amp; tackling problems of day to day life by correlating them with appropriate physical principles.</li><li>4. Usage of mathematics in physics equations to describe interpreting results &amp; critically comparing them with experiment &amp; observations.</li></ol>
<b>B.Sc. with CHEMISTRY</b>	<ol style="list-style-type: none"><li>1. The Chemistry temperament among young students will be devolved to design and carry out scientific experiments and record accurately the results and analyze the achievements.</li><li>2. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.</li><li>3. Career opportunities for Chemistry Aspirants in Industries are: Analytical Chemist, Biotechnologist, Chemical Engineer, Healthcare scientist, clinical biochemistry, Forensic Scientist, Nanotechnologist, Pharmacologist Scientist, Scientific Toxicologist.</li><li>4. Professional Opportunities for Chemistry Aspirants are: Civil Service fast Streamer, Environmental Consultant, Higher Education Lecturer, Management Consultant, Nuclear Engineer, Patent Attorney, Radiation Protection, Practitioner</li></ol>
<b>B.Sc. with MATHEMATICS</b>	<ol style="list-style-type: none"><li>1. Helps students to solve the problems in Physics, Chemistry and Computer Science</li><li>2. Students are able to formulate and develop mathematical arguments in a logical manner</li><li>3. Demonstrate basic analytical skills in algebra, aptitude, reasoning, and coding.</li><li>4. Apply the underlying unifying structures of mathematics (i.e. sets, relations and functions, logical structure) and the relationships among them</li></ol>



<p><b>B.Sc. with BOTANY</b></p>	<ol style="list-style-type: none"> <li>1. Understand the nature and basic concepts of Embryology, Plant Physiology and Biochemistry.</li> <li>2. Learn about the different characteristic features of Cryptogams namely Algae, Fungi, Bryophytes, Pteridophytes Gymnosperms, and Angiosperms. Understand the Pale Botany, Plant Taxonomy, Economic and Medicinal value of plants.</li> <li>3. Analyze the relationship between the plant and environment, Phytogeography, Conservation Of natural resources and Structure of ecosystem.</li> <li>4. Understand the Cell biology, Structure and function of Chromosomes, Genetics, Organic Evolution, Molecular Biology, Nucleic Acids, Gene Expression, Bioinformatics, Immunology, Biotechnology and Genetic Engineering.</li> </ol>
<p><b>B.Sc. with ZOOLOGY</b></p>	<ol style="list-style-type: none"> <li>1. Learn Analytical skills.</li> <li>2. Acquire jobs in different sectors such as schools, Government offices, (Agriculture, Horticulture, Apiculture...etc.)</li> <li>3. Pursue post-graduation degree in Zoology, Marine biology, Forestry and sericulture.</li> <li>4. Prepare and face the competitive examinations such as IFS, UPSC, KPSC, Railway, and IBPS.</li> <li>5. Start own entrepreneurship.</li> </ol>
<p><b>INDIAN CONSTITUTION for (BA B.Sc.&amp; BCOM 1<sup>st</sup> Sem)</b></p>	<ol style="list-style-type: none"> <li>1. By studying Indian constitution paper, the students acquire good knowledge of fundamental rights &amp; duties of citizens, structure and functions of the central and state government, judiciary, legislature and autonomous body like Election Commission.</li> <li>2. This paper promotes the awareness of the rights and suggest the mechanism to safeguard their rights.</li> <li>3. It also contributes to build discipline in the society</li> <li>4. It also gives the knowledge and strength to face the society and people.</li> </ol>
<p><b>ENVIRONMENTAL STUDIES &amp; HUMAN RIGHTS for (BA B.Sc. &amp; BCOM 2<sup>nd</sup> Sem)</b></p>	<ol style="list-style-type: none"> <li>1. By studying EVS the students will develop knowledge, skills, commitment to work individually and collectively towards solutions of current problems and prevention.</li> <li>2. It brings awareness about surrounding nature through live experiences on various aspects of the things like animals, plants, food, water etc.</li> <li>3. By studying Human rights, the students get the capacity to identify issues&amp; problems relating to the realization of human rights.</li> <li>4. It strengthens the ability to contribute to the resolution of human rights issues &amp; problems.</li> <li>5. It also develops investigative &amp; analytical skills.</li> </ol>

	<p>6. Students will be able to work independently &amp; carry out a professional &amp; original work in the field of human rights, in NGO'S, International organization, Ministries &amp; state agencies that address human rights.</p>
<p><b>PERSONALITY DEVELOPMENT &amp; COMMUNICATION SKILLS</b> (BA B.Sc. BCom 3<sup>rd</sup> Sem)</p>	<ol style="list-style-type: none"> <li>1. Students' attitude towards life changes as they learn how to behave themselves and treat people.</li> <li>2. Students learn importance of dressing sense in life and are able to be disciplined at workplace.</li> <li>3. Students can establish command over language by improving their listening, speaking, reading and writing skills</li> <li>4. Improving of communication skills help them to pursue their career in MNCs.</li> <li>5. Students learn basics of leaderships and can inspire generations by becoming leaders</li> </ol>
<p><b>COMPUTER APPLICATION</b> for (BA &amp; B.Sc. 4<sup>th</sup> Sem)</p>	<ol style="list-style-type: none"> <li>1. The ability to understand, analyze the computer programs in the areas related to system software, multimedia, Web application program, database, networking for efficient design of computer-based systems of varying complexity. PSO2</li> <li>2. Ability to provide socially acceptable technical solutions to complex computer science engineering problems with the application of modern Technologies.</li> </ol>
<p><b>BASIC ENGLISH, HINDI, KANNADA</b> For (BA B.Sc.&amp; BCOM)</p>	<ol style="list-style-type: none"> <li>1. After reading literature students can be emotive and creative to lead life. They can twist and turn the flexibility of language and make their writing fully filled with emotion and feelings.</li> <li>2. After reading various subjects students can earn command over the subjects of their choice.</li> <li>3. Subject knowledge they earn helps them to pursue career in the field of education, translation, freelancing, management, creative writing, editing, banking, publication, and journalism.</li> <li>4. Languages help the students to develop their LSRW Skills.</li> <li>5. Languages enhance the Vocabulary.</li> <li>6. Students will learn the art of using Spoken Language into Literary Language effectively &amp; systematically.</li> <li>7. Help the Students to develop their Communication Skills.</li> <li>8. Students learn to correlate Science with Literature.</li> <li>9. Socio scientific approach through literature enables to move forward</li> </ol>



from Local to Global.  
10. Imbibe moral and human values through the study of language.

### COURSE OUTCOMES OF B.SC. PHYSICS

Semester	Course Code & Name	OUTCOMES	
B.Sc.I Semester	A350 Mechanics And Theory Of Relativity	CO1	Learned conservation laws of energy and linear momentum
		CO2	Derivation for Kepler's Second and Third law. To estimate angular velocity, moment of inertia & it helps for launching the Satellites.
		CO3	To determine young's modulus for different bodies. Modulus of elasticity.
		CO4	Inertial and non-inertial frame of references and Einstein's mass energy relation.
B.Sc.II Semester	B350 Electricity And Magnetism	CO1	Scalar and vector products. Gauss Divergence theorem and Stokes theorem. Derivation of Maxwell's equations in differential form
		CO2	Derivation of Thevenin's and Norton's theorem & Superposition theorem. Theory of growth & Decay of current in RL circuit.
		CO3	Statement of Biot Savart's law. Principle, construction & theory of Helmholtz Galvanometer. concept of series resonance and parallel resonance.
		CO4	Theory of Ballistic Galvanometer. Derivation for relation between D,E and Boundary conditions for E & D.
B.Sc.-III Semester	C350 Geometrical Optics & Electricity	CO1	Used in variety of technology & everyday objects including mirrors, lenses, telescope's & microscopes.
		CO2	Study of Aberration to reduce the blurred images of telescope, lenses etc. & to study charged particles in uniform motion.
		CO3	Used in determination of dielectric constants of a solid.
		CO4	To determine time constant of RL & RC circuit.
		CO5	Understand the relevance of Ballistic Galvanometers, earth inductor & CRO.
	D350	CO1	Used to determine radius of curvature of lenses.



B.Sc.-IV Semester	Physical Optics & Electricity	CO2	It helps to study Zone plate, crystal structure, holography & to determine wavelength of light.
		CO3	Used to reduce the glare of head lights of the cars & to prepare polarized glasses.
		CO4	AC used for power distribution, home appliances, Industry transportation, business & production of electricity.
		CO5	Uses in cooling devices, conversion of temperature, to determine thermo power & thermo emf.
B.Sc.-V Semester(Paper-I)	E420 Classical Mechanics, Electronics & Relativity	CO1	Conservation laws of energy and linear and angular momentum and apply them to solve problems.
		CO2	Study about nanophysics and its application in day today life.
		CO3	Fundamental ideas of special theory of relativity such as length contraction and time dilation and mass –energy invariance
		CO4	Learn about the Networks theorem & Power supplies – Rectifiers, filters, Zener Diode & Bridge rectifiers.
		CO5	Study about transistors which are used in military of high-power radio frequency, cellular phones, computers, microprocessors & oscillators.
B.Sc.-V Semester (Paper-II)	E430 Quantum Mechanics & Spectroscopy	CO1	To become familiar with Blackbody radiation, Ultraviolet catastrophe, Photoelectric effect and Compton Effect and hence be aware how quantum theory emerged.
		CO2	To find solution to Schrödinger's equation for many systems such as particle in a box, Hydrogen Atom and familiarize with different quantum numbers.
		CO3	They will learn about atomic & molecular spectra, lasers & Raman Effect. Applications of spectra's & lasers were studied.
		CO4	In spectra they will learn about the different spectra's & molecular structures.
		CO5	It helps in the development of mathematical methods suitable for applications & formulation of physical theories.
B.Sc.-VI Semester	F420 Solid State Physics, Nuclear	CO1	Have a clear picture of crystal structures and a clear understanding about x-ray diffraction.
		CO2	Expected to gain knowledge of superconductivity, its underlying principles and its applications.



(Paper-I)	Physics, Energy Sources, Digital Electronics & Special Materials	CO3	Gain a clear picture of nuclear composition, various nuclear models & different type of lasers.
		CO4	Physical principle of conversion of solar energy into heat energy, solar energy harvesting devices like solar cells, solar cookers, solar greenhouses etc.
		CO5	They will study about the gates & special materials. They are used in digital electronic components, clocks etc.
B.Sc.-VI Semester (Paper-II)	F430 Integral Transforms, Optoelectronic s, Communicatio n, Programming & Integrated Electronics	CO1	To study Fourier & Laplace transforms required in solving applied physics.
		CO2	Diodes like LEDS, Photodiodes, laser diodes are to be studied & applications of optical fibers in day to day life are studied.
		CO3	Learn about types of waves & AM_FM modulation & demodulations were also studied.
		CO4	Here learn about the basic computer programming & C language required in physics & general purpose.
		CO5	They will study about multivibrators & integrated circuits along with Op Amp & their applications in electronics equipment's.

#### COURSE OUTCOMES OF B.SC WITH CHEMISTRY SUBJECT

Semester	Course Code & Name	Outcomes	
B.Sc.- I Semester	44024/A0240 (SQL): Chemistry-01	CO1	The new concept of atomic structure emerging from Bohr model of an atom to quantum mechanics and distribution of electrons in various elements.
		CO2	This course will provide insight into some of the fundamental concept and principles that are very essential in the study of chemical bonding molecular structures of various elements through VB theory and MO theory.
		CO3	Students are focused to understand the fundamentals of organic chemistry consisting of mechanism, structure and shape of organic molecules. Chemical behavior of alkenes and dienes are dealt with specific examples.
		CO4	Students are familiarized to understand the concept purifications of organic solids and liquids using modern technology like chromatography and distillation methods. The new concept of Stereochemistry enables the students to understand the three-

			dimensional view of organic molecules and optical and geometrical phenomenon.
		CO 5	It will develop the practical skills among the students for volumetric estimations.
B.Sc.- II Semester	44024/B0240 (SQL): CHEMISTRY -02	CO 1	Students are exposed to third law of Thermodynamics and Joule Thomson's coefficient for ideal gas.
		CO 2	The concepts will enable the students to understand the concept of ionic equilibria and the relation between $K_p$ , $K_c$ and $K_x$ for reaction involving ideal gas.
		CO 3	Students are made familiar with UV – Spectroscopy of Organic molecules and Woodward and Fieser rules. $S_N1$ , $S_N2$ and $S_Ni$ reactions of aryl and alkyl halides involving the name reaction like William ether synthesis and Benzyne mechanisms were discussed
		CO 4	The new concept of certain name reaction and mechanism are dealt with reference to Aldehydes, Ketones, Carboxylic acids, Ethers and Epoxides.
		CO 5	Students are made to develop practical skills of identifying organic compounds by qualitative analysis.
B.Sc.- III Semester	35324/C 240: CHEMISTRY -03	CO 1	The students are advised to learn steps involved in metallurgical process.
		CO 2	The students are imparted regarding orientation of functional groups and understand the reaction mechanism of organic molecules.
		CO 3	Students are exposed to fundamentals and applications of IR spectroscopy and new concept of entropy.
		CO 4	Students are focused to new experiments like Surface tension, Viscosity, Kinetics, Adsorption and Ebullioscopy.
B.Sc.-IV Semester	42424/D 240: CHEMISTRY -04	CO 1	To understand the general characteristics of d and f block elements, thorough knowledge of Bioinorganic Chemistry, Environmental Chemistry and Water pollution.
		CO 2	In order to familiarize the students about principles of electrochemistry and its applications, the new concepts like II order kinetics, half-life period, adsorption of solute are



			highlighted.
		CO 3	The practical skills of qualitative analysis among the students are developed for separation of cations and anions from binary inorganic mixtures.
B.Sc.- V Semester P-I	35525/E 250: CHEMISTRY -P-I	CO 1	This course will provide an insight into some of the fundamental concepts of coordination chemistry and gravimetric analysis.
		CO 2	Students are exposed to a new method of synthesis using a green chemistry to understand the isolation, constitution, medicinal importance of natural products.
		CO 3	To study and understand the applications of microwave and vibrational spectroscopy, there is an exposition to a new concept of phase rule.
		CO 4	The practical skills are developed among the student community for preparation and purification of organic compounds.
B.Sc.- V Semester P-II	35526/E 260: CHEMISTRY -P-II	CO 1	Students are exposed to understand about industrial methods of preparations and their applications of alloys, cements, pigments, abrasives and glasses.
		CO 2	This will impart the knowledge of natural products and understand the importance of mass spectroscopy.
		CO 3	It provides an insight into ionic equilibriums and electrical properties of ions in solutions.
B.Sc.- VI Semester P-I	35625/F 250: CHEMISTRY -P-I	CO 1	Students will learn the reaction mechanisms of metal complexes and the elucidation of the structures using various spectroscopic methods.
		CO 2	Students are exposed to natural products like: Carbohydrates, Vitamins, Hormones, Amino acids, Peptides, Proteins and Terpenoids.
		CO 3	The knowledge of UV-spectroscopy is imparted to students to understand the electronic transitions of organic molecules.
		CO 4	The students will get skills in estimations of organic compounds and also are exposed to determination of intensity of color of different complexes by calorimeter.
		CO 1	Students are adequately exposed to new methods of

B.Sc.- VI Semester P-II	35625/F 260: CHEMISTRY -P-II		instrumentations in chemistry.
		CO 2	The knowledge of the new concept of chemotherapy and relevant applications for day today life care imparted.
		CO 3	Enabling the students about various methods employed for construction and working of standard cell and its applications.
		CO 4	The students are made to learn gravimetric estimations and are also exposed to attend an industrial study tour to excel their practical skills.

**COURSE OUTCOMES OF B.SC WITH MATHEMATICS SUBJECT**

Semester	Course Code & Name	OUTCOMES		
B.Sc.- I Semester (CBCS)	MATDSCT 1.1 Algebra -I and Calculus -I	CO1	Students gain the knowledge of finding rank of any type of matrix using different methods, how to solve problems corresponding to business and economics by using matrices and determinants	
		CO2	Know applicability of real numbers in other subjects.	
		CO3	Able to know what type of functions are continuous or discontinuous curves, geometrical meaning of continuity and differentiability. Applications of L'Hospital Rule in evaluating limits.	
		CO4	To find higher order derivatives, nth derivative of product and its application in getting differential equation of nth order.	
		CO5	Roll's, Lagrange's and Cauchy's Theorem. Series expansion of functions, use of Taylor's Theorem series expansion.	
	MATDSCP 1.1	CO1	Using SCI Lab, students can run program for operations of Matrices, Rank of Matrix and Inverse of Matrix, etc.	
		CO2	Using Maxima, students can run program for nth order derivatives and expansions.	
			CO1	Able to find differentiation of polar curves, angle between two polar curves and pedal equation for all type of curves.



B.Sc.- II Semester(C BCS)	MATDSCT 1.2 CALCULUS -II AND 3- DIMENSION AL GEOMETRY	CO2	Able to determine formula for curvature, evaluate and application of curvature in construction of lenses. Concavity and convexity and points of inflexion.
		CO3	Able to find limits, continuity of functions of two variables. Partial derivatives, higher order partial derivatives, total derivatives and total differentials, Homogeneous functions, Euler's theorem on homogeneous functions.
		CO4	Recognize to determine given equation represents sphere, Cone and Cylinder and gain the knowledge properties of these 3-D figures.
	MATDSCP 1.2 PRACTICAL 'S	CO1	Able to write program for given equation
		CO2	Students are able to trace the curves using program.
B.Sc.-III Semester	C330- LOGIC AND REAL ANALYSIS	CO1	Able to test the truth values of given statement
		CO2	Know continuity & differentiability of functions two variables, Jacobians, LaGrange's and Tayler's Theorem for two variables.
		CO3	Test convergent and divergent of Sequence.
	C340- GROUP-I, INTEGRAL CALCULUS AND DIFFERENTI AL EQUATION I	CO1	Find number subgroups, generators for a group, and applications of symmetric groups in Physics.
		CO2	Find arc length of given curve, area under given curve and volume and surface area of given solid by using integration.
D330- VECTORCALCULUS AND INFINITE	CO1	Find and interpret the gradient curl, divergence for a function at a given point and rotational, irrotational and solenoidal vector.	
	CO2	Test convergence, divergence of infinite series by using different tests and applications of series in business and physics.	



B.Sc.-IV Semester	SERIES	CO3	Verify the given series is convergent or divergent by using different test.
	D340- GROUP II, FOURIER SERIES AND DIFFERENTIAL EQUATION II	CO1	Define normal subgroups, quotient groups and index of a subgroup homomorphism kernel of a homomorphism and isomorphism.
		CO2	Find Fourier series expansions for given functions. Find Cosine and Sine series expansions for given functions.
		CO3	Compute all the solutions of second and higher order linear differential equations with constant coefficients, linear equations with variable coefficients.
B.Sc.-V Semester	E370-REAL ANALYSIS	CO1	Evaluate given definite integral by Riemann integration b Beta Gamma function and differentiation under integral sign easily
		CO2	Test convergence and divergence of given improper integral by using different tests.
		CO3	Evaluate multiple integrals and area, surface area and volumes by multiple integrals.
	E380- NUMERICAL ANALYSIS	CO1	Define Basic concepts of operators $\nabla$ , $\Delta$ and $E$ , solve problems using Newton forward formula and Newton backward formula.
		CO2	Derive Gauss's formula and Stirling formula using Newton forward formula and Newton backward formula.
		CO3	Solve polynomial equations by using different numerical methods
	E390- DYNAMICS AND CALCULUS OF VARIATION	CO1	Define Projectile, impulse, impact and laws of impact, the path of a projectile is a parabola.
		CO2	Find the direct and oblique impact of smooth elastic spheres.
		CO3	Find calculus of variation for functional and maximum and infimum surface required by given close curve. Geodesic on plane, sphere, cylinder etc.
			CO1

<b>B.Sc.-VI Semester</b>	<b>F370- DIFFERENTIAL EQUATIONS</b>	CO2	Find the solution of First order partial differential equations for some standard types.
		CO3	Find solution of differential equations by series solution using different methods
	<b>F380- COMPLEX ANALYSIS AND RING THEORY</b>	CO1	Understand the significance Cauchy-Riemann equations., complex integration.
		CO2	Concept of Singularities and poles and using them in solving contour integration
		CO3	Define rings, zero divisors of a ring, integral domain, and field and prove theorems.
	<b>F390- TOPOLOGY AND LAPLACE TRANSFOR M</b>	CO1	Define topology, topological properties of a set.
		CO2	Define of Base and sub-base, subspace, T1 and T2space.
		CO3	Define Laplace transform, properties, find L. T. of standard basic functions.
		CO4	Find Inverse LT, solving Differential equation by LT and applications

**COURSE OUTCOMES OF B.SC. WITH BOTANY SUBJECT**

Semester	Course Code and Name	Outcomes	
<b>B.Sc. - I Semester</b>	<b>BOTDSCT 1.1</b>	CO1	Know the life cycle pattern, and useful activities of Algae and classification of Fungi.
		CO2	Know the scope and importance of plant pathology.
		CO3	Understand the thallus structure, and reproduction of Bryophytes.
		CO4	Understand the morphological diversity of Pteridophytes and Gymnosperms.
		CO5	Introduction of Paleobotany.
		CO6	Understand diversity among the plants
<b>B.Sc. II Semester</b>	<b>B230 PLANT</b>	CO1	Learn about the requirement of water and way of absorption of water in plants.



	PHYSIOLOGY AND BIOCHEMISTRY	CO2	Understand the process of photosynthesis in higher plants with particular emphasis on light and dark reactions, C <sub>3</sub> and C <sub>4</sub> pathways.
		CO3	Understand the plant movements.
		CO4	Learn about the various methods of carbohydrate synthesis.
B.Sc. III Semester	C230 DIVERSITY OF CRYPTOGRAMS	CO1	Know the life cycle pattern, and useful activities of Algae and classification of fungi.
		CO2	Know the scope and importance of plant pathology.
		CO3	Understand the thallus structure, and reproduction of Bryophytes.
		CO4	Understand the morphological diversity of Pteridophytes and Gymnosperms.
		CO5	Introduction of Paleobotany.
B.Sc. IV Semester	D230 DIVERSITY OF ANGIOSPERMS & THEIR SYSTEMATICS, ECONOMIC, MEDICINAL BOTANY	CO1	Understand the study of stem and its modification, and phyllotaxy.
		CO2	Learn about the botanical nomenclature, classification of Angiosperms.
		CO3	Understand the key characters of various families.
		CO4	Gain knowledge about various plants of economic uses.
B.Sc. V Semester	E230 PLANT BREEDING, TISSUE CULTURE AND HORTICULTURAL PRACTICES	CO1	Understand the principle and basic protocols for Plant Tissue Culture.
		CO2	Understand the science of plant breeding.
		CO3	Learn about the nursery management and its importance.
		CO4	Gain the knowledge about greenhouse technology.
B.Sc. V Semester	E240 ECOLOGY, ENVIRONMENTAL BIOLOGY	CO1	Know the relationship between plant and environment.
		CO2	Learn about conservation of biodiversity, Non-conventional Energy and Pollution.
		CO3	Discover botanical regions of India and vegetation types



	AND PHYTOGEO GRAPHY		of Karnataka.
		CO4	Understand Bioremediation, Global warming and climate change.
		CO5	Learn about the conservation of natural resources and methods of effluent treatment of Industrial waste water.
B.Sc. VI Semester	F230 CYTOLOGY, GENETICS & EVOLUTION	CO1	Understand Cell wall, Plasma membrane, Cell organelles and cell division.
		CO2	The eukaryotic cell cycle, mitotic and meiotic cell division.
		CO3	Mendelian and Neo-Mendelian genetics.
		CO4	To understand the different types of genetic interaction, incomplete dominance, co dominance, inter allelic genetic interactions.
		CO5	Learn about the origin of life and modern concept of evolution.
B.Sc. VI Semester	F240 MOLECULA R BIOLOGY, BIOTECHNO LOGY, AND IMMUNOLO GY	CO1	Learn the scope and importance of molecular biology.
		CO2	Understand the biochemical nature of nucleic acids, experimental evidences to prove DNA as a genetic material.
		CO3	Understand the process of synthesis of proteins and role of genetic code in polypeptide formation.
		CO4	To know the biotechnology, and genetic engineering of plants.
		CO5	Understand the microbial genetic manipulation.
<b>COURSE OUTCOMES OF B.SC.WITH ZOOLOGY SUBJECT</b>			
<b>Semester</b>	<b>Course Code and Name</b>	<b>Outcomes</b>	
B.Sc. I Semester	A 380 Non-Chordates	CO 1	To know the basic concepts
		CO 2	To know the details of microorganisms.
		CO 3	study of disease-causing organisms
B.Sc. II Semester	B 380 Chordates	CO 1	Understand the structure of chordate type animals.
		CO 2	Know the general aspects of Vertebrates.
		CO 3	Learn the anatomical & Physiological systems in all animals.

		CO 4	Learn the Economy from different Animals
<b>B.Sc.III Semester</b>	C 380 Animal Physiology, Biochemistry, DevlBiology	CO 1	Understand the knowledge of Anatomy & Physiological functioning's of the body.
		CO 2	know about development of the body from single cell Zygote.
		CO 3	Know chemistry of biomolecules in body.
		CO 4	Various disorders due to deficiency of vitamins
		CO 5	Know various means to control Human population.
<b>B.Sc.IV Semester</b>	D 380 Ethology,Histo logy,CellBiolo gy	CO 1	Understand the Basic Unit of Life- Cell
		CO 2	Learning of Zoology is achieved through Classroom teaching & in Laboratory Experiments.
		CO 3	Learn the Preparation of Permanent Slide methods.
		CO 4	Learning the Developmental stages through the slides of Animals.
<b>B.Sc. V Semester</b>	E461 Wild Life Conservation,P aleontology, Ecosystem Paper-I	CO 1	Understand the Characters of our Environment.
		CO 2	Students are exposed to the field to study the Different Habitats
		CO 3	Understand the Reasons for various Natural Calamities.
		CO 4	To impart the knowledge about wild life conservation.
		CO 5	To motivate the students to show concern to our environment & to protect it.
	E470 Genetics,Biost atistics,Biotech nology Paper-II	CO 1	Study the D.N.A related problems.
		CO 2	Understand the various theories involved in Genetics.
		CO 3	Biotechnology used in Animal Husbandry
		CO 4	Provide the knowledge of Human Genetic disorder, Production of Vaccination of Hepatitis-B
		CO 5	Culturing of cells & Tissues.
<b>B. Sc. VI Semester</b>	F461 AppliedZoolo gy Paper-I	CO 1	The course will provide detailed information about the Entrepreneurship
		CO 2	Students will get skills in yield of crops by Vermicomposting



F470 Microbiology, Nanotechnology ,Bioinformatics & Methods in Biology Paper-II	CO 3	Imparts the Knowledge of increase of economy by various methods of Pearl Culture.
	CO 4	Know the Economic Importance of Apiculture- as Medicinal, cosmetics, Wax preparation.
	CO 5	Understand the Insect-Pest management.
	CO 1	Come out with the Knowledge of detection of Dreadful diseases as Cancer.
	CO 2	Study the Technical information in Biological science.
	CO 3	To develop the use of Instruments to detect various Diseases.
	CO 4	Improving the Quality of Life.
	CO 5	Enhancement of Human life towards Betterment & Longevity.



**Co-Ordinator**  
**IQAC**  
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STC Arts and Commerce College, Banhatti.



**PRINCIPAL**  
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