

SANT HIRDARAM GIRLS COLLEGE, BHOPAL



COURSE OUTCOMES

**DEPARTMENT
OF
COMPUTER
SCIENCE**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
BCA I Year	Problem Solving and Programming through C	<p>After completing the course the student must demonstrate the knowledge and ability to:</p> <p>CO1: Able to implement the algorithms and draw flowcharts for solving Mathematical problems.</p> <p>CO2: Demonstrate an understanding of computer programming language concepts.</p> <p>CO3: Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures.</p> <p>CO4: Develop confidence for self-education and ability for life-long learning needed for Computer language.</p>
	Office Automation Packages and Tools	<p>CO1: The course aims to provide knowledge about basic components of a computer and their significance.</p> <p>CO2: Office tools course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools.</p> <p>CO3: To familiarize the students in preparation of documents and presentations with office automation tools.</p> <p>CO4: By learning the course, the students will be able to perform documentation, to perform accounting operations & to perform presentation skills.</p>

Subject	Paper	Course Outcomes
BCA I Year	Computer Fundamental	<p>CO1: Get introduces with computing fundamentals from older, mature technologies through recent and emerging technologies.</p> <p>CO2: Understand the concept of input and output devices of Computers and how it works and recognize the basic terminology used in computer programming.</p> <p>CO3: Understand the concept of internet, virus and networking technology.</p>
	Business Maths	<p>CO1: Students will become skilled in computations and applications of matrices to solve industrial problems.</p> <p>CO2: Solve applied problems using differentiation and integration.</p>
	Digital Computer Organization	<p>CO1: Given an introduction to digital computer and their fundamental architectures & Data Representation.</p> <p>CO2: Understand the concepts of Binary Logics, Gates, and Combinational & Sequential Circuits.</p> <p>CO3: Memory organization, hierarchy and organization. Able to aware of RAM, ROM, COST, SIZE, CACHE and virtual memory. Comprehend the need for improving cache perform.</p> <p>CO4: Understanding the principle of Microprocessor and CPU organization, Data Transfer modes and schemes.</p>

Subject	Paper	Course Outcomes
BCA I Year	Financial Accounting	<p>CO1: To provide the knowledge to students regarding the assets, liabilities, income & expenses of any business.</p> <p>CO2: To provide the knowledge to students for preparing accounts and financial statements of various types of business units</p> <p>CO3: To expand the skill to collect, analyze, and communicate quantitative and non-quantitative information to assist management.</p> <p>CO4: To provide the knowledge regarding the tools & techniques of financial analysis so that comparative study of data can be possible.</p>
	Communication English	<p>CO1: Proficiency in English Communication Skills.</p> <p>CO2: Knowledge of basic English Language Skills regarding comprehension and expression.</p> <p>CO3: Knowledge of various types of correspondences.</p> <p>CO4: Learning about leadership, team building decision making and stress management.</p>



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Subject	Paper	Course Outcomes
BCA II Year	Programming with C++ & Data Structure	<p>CO1: Understand importance of object oriented programming and difference between structured oriented and object oriented programming features. Develop an in-depth understanding of object oriented paradigm with principles of classes, objects and functions.</p> <p>CO2: Able to make use of objects and classes for developing programs. Ø</p> <p>CO3: Implement various object oriented concepts to solve different problems.</p> <p>CO4: Apply algorithms, flowcharts and applications of graphs and trees to simplify real time problems.</p> <p>CO5: Implement the abstract data types stack, queue, deque, and list.</p>
	RDBMS Concept	<p>CO1: Understand, effectively & explain the underlying concepts of database Technologies.</p> <p>CO2: Design and implement a database schema for a given problem-domain.</p> <p>CO3: Normalize a database and query a database using SQL DML/DDI/DCL/TCL/DQL commands.</p> <p>CO4: Declare and enforce integrity constraints on a database.</p>

Subject	Paper	Course Outcomes
BCA II Year	Computer Oriented Numerical and Statistical Techniques	<p>CO1: Apply numerical methods to find our solution of algebraic equations using different methods under different conditions, and numerical solution of system of algebraic equations.</p> <p>CO2: Apply various interpolation methods and finite difference concepts.</p> <p>CO3: Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.</p> <p>CO4: Work numerically on the ordinary differential equations and partial differential equations using different methods through the theory of finite differences.</p> <p>CO5: Work numerically on the Correlation and Regression using different methods.</p>
	Web Designing & Dot Net	<p>CO1: Understand and know how to use descriptive languages like HTML and XML. They will also know how to use web programming languages (JavaScript and C#) and be capable of construction less demanding web application on their own.</p> <p>CO2: Distinguish between server-side and client-side web technologies.</p> <p>CO3: Design and implement dynamic websites with good aesthetic sense of designing and latest technical know-how's.</p>

	Paper	Course Outcomes
	Operating System & DS	<p>CO1: Describe & Discuss the basic concepts of operating systems.</p> <p>CO2: Explain the mechanism of Process Management and Process Synchronization.</p> <p>CO3: Explain Virtual memory concepts and file management methods.</p> <p>CO4: Illustrate disk management and describe UNIX system organization and LINUX architecture.</p> <p>CO5: Develop basic Shell scripts.</p>
BCA II Year	Software Engineering	<p>CO1: Describe theories, models, and techniques that provide a basis for the software lifecycle</p> <p>CO2: Use software metrics to estimate various software project parameters</p> <p>CO3: Design, test, deploy and maintain Software.</p> <p>CO4: Illustrate Software project management, Time management, Cost and Quality management.</p> <p>CO5: Describe Project Human resource management, Configuration management and use CASE tools.</p>
	Organisational Behaviour	<p>CO1: To enables students to learn the basics of individual behaviour and group behaviour.</p> <p>CO2: To make them understand the organizational dynamics and organizational culture.</p> <p>CO3: To make them aware about Goal setting, Interpersonal Skills, Stress & Time Management , Leadership Qualities.</p> <p>CO4: To make them understand the concept and importance of Organizational Behaviour in present scenario.</p>



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BCA III Year	Computer Network	<p>CO1: To make students well familiar with computer and networking fundamentals.</p> <p>CO2: To Build an understanding of the fundamental concepts of computer networking.</p> <p>CO3: To prepare students with basic networking concepts: data communication, protocols and standards, various topologies & applications of network.</p>
	Core Java	<p>CO1: Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.</p> <p>CO2: Use object oriented concepts in Java Programming.</p> <p>CO3: Execute programs using Inheritance and Multi-Threaded programming.</p>
	MIS	<p>CO1: Understand the role of information systems in today's competitive business environment.</p> <p>CO2: Understand an information system from both a technical and business respective and distinguish between computer literacy and information systems literacy.</p> <p>CO3: Analyse the major management challenges to building and using information systems in organizations.</p> <p>CO4: Analyse the relationship between information systems and organizations.</p>

Subject	Paper	Course Outcomes
BCA III Year	Python Programming	<p>CO1: Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.</p> <p>CO2: Demonstrate proficiency in handling Strings and File Systems.</p> <p>CO3: Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.</p> <p>CO4: Interpret the concepts of Object-Oriented Programming as used in Python.</p> <p>CO5: Implement exemplary applications related to Tinker and Databases in Python.</p>
	E- Governance	<p>CO1: Need for change in current service delivery model and role of e-Governance.</p> <p>CO2: Gain a familiarity with the basic concepts, terminology and technology of e-commerce/e-government.</p> <p>CO3: Understand the various stages of e-governance and various models of e-governance.</p> <p>CO4: Understand the major federal and state laws and regulations impacting the evolution of e-government.</p> <p>CO5: Analyse the issues and challenges.</p>

	Paper	Course Outcomes
	Principal & Management	<p>Learners would be able to develop “team – work” attitude and identify the key competencies required to be an effective manager.</p> <p>CO1: Assume the role and responsibilities associated with managerial function.</p> <p>CO2: Compare various approaches in management for problem solving.</p> <p>CO3: To help the students gain understanding of the functions and responsibilities of managers.</p>
BCA III Year	Project: Application Development using PHP JSP & My SQL	<p>CO1: Design and develop websites using fundamental web languages, technologies, and tools.</p> <p>CO2: Understand various web technology and application development issues and trends.</p> <p>CO3: Conduct independent research on a subject related to the course material.</p> <p>CO4: Understand the practices and procedures being followed in the industries and provide an opportunity to work on some live projects in the industry. Apply the acquired knowledge and skills in solving live problems in the Computer and I.T. industry.</p>



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M.Sc. CS I Sem	Discrete Mathematics	CO1: Solve real world problems logically using appropriate set, function and relation models and interpret the associated operations and terminologies in context. CO2: Analyze and synthesize the real world problems using Discrete mathematics.
	Programming skills with C++	After completing the course the student must demonstrate the knowledge and ability to: CO1: Develop a greater understanding of the issues involved in programming language design and implementation. CO2: Develop an in-depth understanding of object oriented paradigm with principles of classes, objects and functions.
	Office Tools	CO1: Give students an in-depth understanding of why computers are essential components in business, education and society. CO2: Introduce the fundamentals of computing devices and reinforce computer vocabulary, particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing. CO3: Provide hands-on use of Microsoft Office 2013 applications Word, Excel, Access and PowerPoint. Completion of the assignments will result in MS Office applications knowledge and skills.

Subject	Paper	Course Outcomes
	Computer Organization and Architecture	<p>CO1: Identify, understand and apply different number systems and codes.</p> <p>CO2: Understand the digital representation of data in a computer system & memory organization.</p> <p>CO3: Understand the general concepts in digital logic design, including logic elements, and their use in combinational and sequential logic circuit design.</p> <p>CO4: Understand computer arithmetic formulate and solve problems, understand the performance requirements of systems.</p>



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M.Sc. CS II Sem	Data Structure and Algorithms	CO1: Have practical knowledge on the application of data structures. CO2: Apply algorithm, Flowchart and applications of graphs and trees to simplify real time problems. CO3: To use appropriate algorithmic strategy for better efficiency.
	Advanced Computer Networks	CO1: Understand the concepts of data communication at different layers and compare ISO - OSI model with TCP/IP model. CO2: Knowledge of networking protocols at data link layer. CO3: Analyze various routing algorithms and protocols at network layer & transport layer protocols and congestion control algorithms. CO4: Explore protocols at application layer and understanding the concepts of IT Act & Cyber Law.

Subject	Paper	Course Outcomes
M.Sc. CS II Sem	Advanced RDBMS	<p>CO1: Master the basic concepts and appreciate the applications of database systems and the basics of SQL and construct queries using SQL.</p> <p>CO2: Be familiar with a commercial relational database system (Oracle) by writing SQL using the system & with the relational database theory, and relational algebra expressions for queries.</p> <p>CO3: Master sound design principles for logical design of databases, including the E-R method and normalization approach.</p> <p>CO4: Be familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B-tree, and hashing, query optimization & transaction processing and concurrency control.</p>
	Operations Research	<p>CO1: Understand how to translate a real-world problem, given in words, into a Mathematical formulation.</p> <p>CO2: Demonstrate the ability to optimize with tools from Linear Programming, Simulation, Transportation problem, etc. in contexts involving uncertainty and scarce or expensive resources.</p> <p>CO3: Formulate and solve Mathematical models (Linear programming problems) by applying the concept of Simplex method and its extensions.</p> <p>CO4: Identify the resources required for a project and generate a plan and work schedule.</p>

Subject	Paper	Course Outcomes
M.Sc. CS II Sem	Project: Information Storage Management	<p>CO1: Provides detailed knowledge, practical training and insight into the implementation and management of various storage technologies with a focus towards applying these technologies in an information lifecycle paradigm.</p> <p>CO2: Search, retrieve and synthesize information from a variety of systems and sources.</p> <p>CO3: Conduct independent research on a subject related to the course material.</p> <p>CO4: Evaluate systems and technologies in terms of quality, functionality, cost-effectiveness and adherence to professional standards.</p> <p>CO5: Integrate emerging technologies into professional practice.</p> <p>CO6: Understand how to apply theory and principles to diverse information contexts.</p>



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Subject	Paper	Course Outcomes
M.Sc. CS III Sem	Linux & Shell Programming	<p>After completing the course the student must demonstrate the knowledge and ability to:</p> <p>CO1: Understanding the basic set of commands and utilities in Linux/UNIX systems.</p> <p>CO2: To understand the inner workings of UNIX-like operating systems.</p> <p>CO3: To gain an understanding of important aspects related to the SHELL and the process.</p> <p>CO4: Students will be able to write shell scripts.</p>
	Compiler Design	<p>CO1: The outcomes of this course is to acquire basic skills for designing the compilers, as well as the knowledge of compiler design.</p> <p>CO2: Understand the application of finite state machines, recursive descent, production rules, parsing, and language semantics.</p> <p>CO3: Analyse & implement required module, which may include front-end, back-end, and a small set of middle-end optimizations.</p> <p>CO4: Use modern tools and technologies for designing new compiler.</p>

Subject	Paper	Course Outcomes
M.Sc. CS III Sem	Programming Skills with Java	<p>CO1: Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.</p> <p>CO2: Execute Java Programs using inheritance and exception handling.</p> <p>CO3: Execute multiple programs simultaneously using multi-threaded programming and Socket Programming.</p> <p>CO4: Design and develop basic Applets.</p> <p>CO5: Implement programs using JDBC and application deployment using Swings.</p>
	Elective 1: Data Ware Housing & Mining	<p>CO1: Understand Data Warehouse fundamentals, Data Mining Principles.</p> <p>CO2: Design data warehouse with dimensional modelling and apply OLAP operations.</p> <p>CO3: Identify appropriate data mining algorithms to solve real world problems</p> <p>CO4: Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining.</p>

Subject	Paper	Course Outcomes
M.Sc. CS III Sem	Elective 2: Operations Research	<p>CO1: Understand how to translate a real-world problem, given in words, into a Mathematical formulation.</p> <p>CO2: Demonstrate the ability to optimize with tools from Linear Programming, Simulation, Transportation problem, Inventory method, Queuing Theory etc. in contexts involving uncertainty and scarce or expensive resources.</p> <p>CO3: Formulate and solve Mathematical models (Linear programming problems) by applying the concept of Simplex method and its extensions.</p> <p>CO4: Identify the resources required for a project and generate a plan and work schedule.</p> <p>CO5: Learn to apply project management tools like CPM/PERT that ensures successful completion of projects.</p>
	Software Engineering	<p>CO1: Explain and differentiate various Software Development models.</p> <p>CO2: Estimate cost of Software using different Model.</p> <p>CO3: Implement the Functional model, object oriented model for explaining problem, and develop SRS for software analysis and design.</p> <p>CO4: Demonstrate Test Cases for software testing.</p> <p>CO5: Describe importance of Quality Assurance processes, SCM and CASE Tools.</p>



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Subject	Paper	Course Outcomes
M.Sc. CS IV Sem	Big Data Analytics	<p>CO1: Student must be Able to understand the building blocks of Big Data.</p> <p>CO2: Student must be able to articulate the programming aspects of cloud computing (map Reduce etc.)</p> <p>CO3: Student must be able to understand the specialized aspects of big data with the help of different big data applications.</p> <p>CO4: Student must be able to represent the analytical aspects of Big Data.</p> <p>CO5: Student must be know the recent research trends related to Hadoop File System, Map Reduce and Google File System etc.</p>
	Multimedia & computer Graphics	<p>After completing the course the student must demonstrate the knowledge and ability to:</p> <p>CO1: Students will be able to solve simple problems in the basic representation and handling of multimedia data (images, audio and animation), and animation to design and develop 2D/3D animations, film-making, visual effects for the creative media.</p>

Subject	Paper	Course Outcomes
M.Sc. CS IV Sem	PHP & My SQL	<p>CO1: Learn how to take a static website and turn it into a dynamic website run from a database using PHP and MySQL.</p> <p>CO2: Analyse the basic structure of a PHP web application and be able to install and maintain the web server, compile, and run a simple web application.</p> <p>CO3: Learn how databases work and how to design one, as well as how to use php My Admin to work with MySQL.</p> <p>CO4: Learn different ways of connecting to MySQL through PHP, and how to create tables, enter data, select data, change data, and delete data. Connect to SQL Server and other data sources.</p>
	Elective 1: Enterprise Resource Planning	<p>After completing the course the student must demonstrate the knowledge and ability to:</p> <p>CO1: Make basic use of Enterprise software, and its role in integrating business functions.</p> <p>CO2: Design the ERP implementation strategies.</p> <p>CO3: Analyse the strategic options for ERP identification and adoption.</p> <p>CO4: Create reengineered business processes for successful ERP implementation.</p>

Subject	Paper	Course Outcomes
M.Sc. CS IV Sem	Cloud Computing	<p>CO1: Explain basics of Cloud Computing.</p> <p>CO2: Efficiently use cloud computing platforms and web services.</p> <p>CO3: Collaborate with cloud using web based communication and management tools.</p> <p>CO4: Use the concept of Virtualization for efficient communication and storage.</p> <p>CO5: Explain various security issues, standards and future scope of Cloud Computing applications.</p>
	Elective 3: Artificial Intelligence	<p>CO1: Discuss the core concepts and algorithms of advanced AI</p> <p>CO2: Understand concept of knowledge representation and predicate logic and transform the real life information in different representation.</p> <p>CO3: Understand state space and its searching strategies.</p> <p>CO4: Understand machine learning concepts and range of problems that can be handled by machine learning.</p> <p>CO5: Apply the machine learning concepts in real life problems.</p>

**DEPARTMENT
OF
COMMERCE**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Com Economics I Year	Financial Accounti ng	<p>CO1: Helps students develop cognizance of the importance of accounting in organization financial statements.</p> <p>CO2: Enables to make financial statements of an organization and profit/loss account to value the actual worth of the business.</p> <p>CO3: Describes how people analyse the business finances under different conditions and understand why people describe the financial statements in different manner.</p> <p>CO4: Students after completion of the syllabus are able to apply Generally Accepted Accounting Principles (GAAP) to all accounting transactions.</p>
	Business Mathematics	<p>CO1: Explain the concepts and use equations, formulae, and mathematical expressions and relationships in a variety of contexts.</p> <p>CO2: Apply the knowledge in mathematics (algebra, matrices, calculus) in solving business problems</p> <p>CO3: Analyze and demonstrate mathematical skills required in mathematically intensive areas in Economics and business.</p> <p>CO4: Analyze the knowledge of logarithms, simultaneous and linear equations.</p>

Subject	Paper	Course Outcomes
B.Com Economics I Year	Business Law	<p>CO1: Understand the concept of Agreement, Contract, essentials and classification of Contracts.</p> <p>CO2: Examine the circumstances and the object can be considered unlawful and void.</p> <p>CO3: Explain the various modes of Discharge of Contract and Remedies for Breach of Contract.</p>
	Business organization & Communication	<p>CO1: Identify the main working aspects of organisation, not only from an economic point of view but also considering organisation as a part of society.</p> <p>CO2: Understand the role of communication in personal and professional success.</p> <p>CO3: Demonstrate writing and speaking process through invention, drafting, editing and presentation.</p>

Subject	Paper	Course Outcomes
B.Com Economics I Year	Micro Economics	<p>CO1: Designed to provide the student with a wide range of analytical skills while at the same time building competence in a particular area.</p> <p>CO2: Enables the students to learn the basic principles of economics and its application in the decision making in the business.</p> <p>CO3: Familiarize the students with the basic working and terminology of economics- production, capacity etc.</p>
	Macro Economics	<p>CO1: Enables the students to understand the functioning of economy at the macro level.</p> <p>CO2: Understand how the economy is regulated through monetary and fiscal policies.</p> <p>CO3: Identify the important indicators of the economy and their significance.</p>



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Subject	Paper	Course Outcomes
B.Com Economics II Year	Cost accounting	<p>CO1: Imbibe conceptual knowledge of cost accounting in manufacturing and service firms.</p> <p>CO2: A crisp understanding of the various elements of Cost.</p> <p>CO3: Calculation of Total Cost of product and services.</p> <p>CO4: Cost Control and Profit planning.</p>
	Corporate Accounting	<p>CO1: Imparting knowledge of various methods of valuation of Goodwill & Shares.</p> <p>CO2: Provide knowledge about the incorporation and managerial share in company & Holding & subsidiary consolidated balance sheet.</p> <p>CO3: Compute the final accounts for a corporate group like banking companies & of Insurance claims.</p> <p>CO4: Merger, amalgamation, Winding up proceeding, liquidation of company.</p>
	Principles of Management	<p>CO1: Assume the role and responsibilities associated with managerial function.</p> <p>CO2: Compares various approaches in management for problem solving.</p> <p>CO3: To help the students gain understanding of the functions and responsibilities of managers.</p>

Subject	Paper	Course Outcomes
B.Com Economics II Year	Principles of Statistics	<p>CO1: Organize, manage and present data.</p> <p>CO2: Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.</p> <p>CO3: Analyze statistical data using measures of central tendency, dispersion and location.</p>
	Banking and insurance	<p>CO1: Identify the various services offered and various risks faced by banks.</p> <p>CO2: Awareness of various banking innovations after nationalization and to give them an overview about insurance industry.</p> <p>CO3: Make the students understand various principles, provisions that govern the Life and General Insurance Contracts.</p>
	Indian Company Act	<p>CO1: Impart knowledge to students regarding fundamentals of Company Law as per the provisions of Companies Act 1956 / 2013.</p> <p>CO2: To make the students understand the duties and responsibilities of Managerial Personnel.</p>



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B.Com Economics III Year	Income Tax Law & Practices	CO1: Enables the students to insights the basics of Income Tax Act 1961 and its implications in computing tax liability of an individual. CO2: Know the residential status of assessee and incomes exempted from tax. CO3: Familiarize with the computation of taxable income from all the heads of direct income. CO4: Provides full knowledge about all deductions, exemption and rebates of income Tax.
	Goods & Service Tax	CO1: Enable the students to learn the concepts of GST and indirect tax from the pre – GST period to post- GST period. CO2: Comprehend the principles of taxations, objectives of taxes and its impact, shifting and incidence process of indirect taxes in the market oriented economy. CO3: Understand the importance of GST as a source of revenue for the government.

Subject	Paper	Course Outcomes
B.Com Economics III Year	Management accounting	<p>CO1: Critical analysis and recommendations to improve the operations of organisations through the application of management accounting tools.</p> <p>CO2: Preparation of estimates and budgets as an essential part of the management.</p> <p>CO3: Application of different techniques of costing for managerial decision making.</p> <p>CO4: Students at the completion of this subject would have a clear understanding of how Accounting is used to take managerial decisions.</p>
	Auditing	<p>CO1: Acquire conceptual knowledge relating to auditing, audit planning, audit program, audit evidence and internal control.</p> <p>CO2: Assess the importance of verification and valuation of assets and liabilities.</p> <p>CO3: Understand the provisions relating to appointment and removal of auditors, types of audits, auditor's report.</p>

Subject	Paper	Course Outcomes
B.Com Economics III Year	Principles of Marketing	<p>CO1: Explain why the customer is the cornerstone of marketing.</p> <p>CO2: Briefly explain the concepts of segmentation and targeting.</p> <p>CO3: Describe the marketing mix.</p> <p>CO4: Explain how organizations use the marketing mix (often called the four Ps) to market to their target customers.</p>
	International Marketing	<p>CO1: Develop an understanding of major issues related to international marketing.</p> <p>CO2: Enhancing skills in researching and analyzing trends in global markets and in modern marketing practice.</p> <p>CO3: Assess organization's ability to enter and compete in international markets.</p>



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B.Com Computer Application I Year	Financial Accounting	<p>CO1: Helps students develop cognizance of the importance of accounting in organization financial statements.</p> <p>CO2: Enables to make financial statements of an organization and profit/loss account to value the actual worth of the business.</p> <p>CO3: Describes how people analyse the business finances under different conditions and understand why people describe the financial statements in different manner.</p> <p>CO4: Students after completion of the syllabus are able to apply Generally Accepted Accounting Principles (GAAP) to all accounting transactions.</p>
	Business Mathematics	<p>CO1: Explain the concepts and use equations, formulae, and mathematical expressions and relationships in a variety of contexts.</p> <p>CO2: Apply the knowledge in mathematics (algebra, matrices, calculus) in solving business problems.</p> <p>CO3: Analyze and demonstrate mathematical skills required in mathematically intensive areas in Economics and business.</p> <p>CO4: Analyze the knowledge of logarithms, simultaneous and linear equations.</p>

Subject	Paper	Course Outcomes
B.Com Computer Application I Year	Business Law	<p>CO1: Understand the concept of Agreement, Contract, essentials and classification of Contracts.</p> <p>CO2: Examine the circumstances and the object can be considered unlawful and void.</p> <p>CO3: Explain the various modes of Discharge of Contract and Remedies for Breach of Contract.</p>
	Business organization & Communication	<p>CO1: Identify the main working aspects of organisation, not only from an economic point of view but also considering organisation as a part of society.</p> <p>CO2: Understand the role of communication in personal and professional success.</p> <p>CO3: Demonstrate writing and speaking process through invention, drafting, editing and presentation.</p>
	Micro Economics	<p>CO1: Enables the students to understand the functioning of economy at the macro level.</p> <p>CO2: Understand how the economy is regulated through monetary and fiscal policies.</p> <p>CO3: Identify the important indicators of the economy and their significance.</p>

Subject	Paper	Course Outcomes
B.Com Computer Application I Year	Fundamentals of Computer& P.C software	<p>CO1: Demonstrate an understanding of computer hardware and software.</p> <p>CO2: Describe the features and functions of the categories of application software.</p> <p>CO3: Present conclusions effectively, orally and in writing.</p> <p>CO4: Understand the dynamics of an office environment.</p> <p>CO5: Demonstrate the ability to apply application software in an office environment.</p>
	Desktop Publishing Multimedia	<p>CO1: After successful completion of the module, the students shall be able to Create Documents and Templates, add text into documents using various methods, and apply different formatting styles to characters and paragraphs.</p> <p>CO2: Import graphics, create objects using various tools, and add effects to objects.</p> <p>CO3: Create a book and export it into PDF Multipage Layout Design.</p> <p>CO4: Identify the basic components of a multimedia project.</p> <p>CO5: Identify the basic hardware and software requirements for multimedia development and playback.</p>



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	Corporate Accounting	<p>CO1: Imparting knowledge of various methods of valuation of Goodwill & Shares.</p> <p>CO2: Provide knowledge about the incorporation and managerial share in company & Holding & subsidiary consolidated balance sheet.</p> <p>CO3: Compute the final accounts for a corporate group like banking companies & of Insurance claims.</p> <p>CO4: Merger, amalgamation, Winding up proceeding, liquidation of company.</p>
	Principles of Management	<p>CO1: Assume the role and responsibilities associated with managerial function.</p> <p>CO2: Compares various approaches in management for problem solving.</p> <p>CO3: To help the students gain understanding of the functions and responsibilities of managers.</p>

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B.Com Computer Application II Year	Principles of Statistics	<p>CO1: Organize, manage and present data.</p> <p>CO2: Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.</p> <p>CO3: Analyze statistical data using measures of central tendency, dispersion and location.</p>
	Banking and Insurance	<p>CO1: Identify the various services offered and various risks faced by banks.</p> <p>CO2: Awareness of various banking innovations after nationalization and to give them an overview about insurance industry.</p> <p>CO3: Make the students understand various principles, provisions that govern the Life and General Insurance Contract.</p>
	Indian Company Act	<p>CO1: Impart knowledge to students regarding fundamentals of Company Law as per the provisions of Companies Act 1956 / 2013.</p> <p>CO2: To make the students understand the duties and responsibilities of Managerial Personnel.</p>

Subject	Paper	Course Outcomes
B.Com Computer Application II Year	Relational Database Management System	<p>CO1: Understand, effectively & explain the underlying concepts of database Technologies.</p> <p>CO2: Design and implement a database schema for a given problem-domain.</p> <p>CO3: Normalize a database and query a database using SQL DML/DDDL/DCL/TCL/DQL commands.</p> <p>CO4: Declare and enforce integrity constraints on a database.</p>
	Internet & E-Commerce	<p>CO1: Analyse the impact of E-Commerce on business models & strategy.</p> <p>CO2: Identify the key security threats in the E-Commerce environment.</p> <p>CO3: Technology resources available to meet E-Commerce business models.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Com Computer Application III Year	Income Tax Law & Practices	<p>CO1: Enables the students to insights the basics of Income Tax Act 1961 and its implications in computing tax liability of an individual.</p> <p>CO2: Know the residential status of assessed and incomes exempted from tax.</p> <p>CO3: Familiarize with the computation of taxable income from all the heads of direct income.</p> <p>CO4: Provides full knowledge about all deductions, exemption and rebates of income Tax.</p>
	Goods & Service Tax	<p>CO1: Enable the students to learn the concepts of GST and indirect tax from the pre – GST period to post- GST period</p> <p>CO2: Comprehend the principles of taxations, objectives of taxes and its impact, shifting and incidence process of indirect taxes in the market oriented economy.</p> <p>CO3: Understand the importance of GST as a source of revenue for the government.</p>

Subject	Paper	Course Outcomes
B.Com Computer Application III Year	Management Accounting	<p>CO1: Critical analysis and recommendations to improve the operations of organisations through the application of management accounting tools.</p> <p>CO2: Preparation of estimates and budgets as an essential part of the management.</p> <p>CO3: Application of different techniques of costing for managerial decision making.</p> <p>CO4: Students at the completion of this subject would have a clear understanding of how Accounting is used to take managerial decisions.</p>
	Auditing	<p>CO1: Acquire conceptual knowledge relating to auditing, audit planning, audit program, audit evidence and internal control.</p> <p>CO2: Assess the importance of verification and valuation of assets and liabilities.</p> <p>CO3: Understand the provisions relating to appointment and removal of auditors.</p>
	Principles of Marketing	<p>CO1: Explain why the customer is the cornerstone of marketing.</p> <p>CO2: Briefly explain the concepts of segmentation and targeting.</p> <p>CO3: Describe the marketing mix.</p> <p>CO4: Explain how organizations use the marketing mix to customers.</p>

Subject	Paper	Course Outcomes
B.Com Computer Application III Year	International Marketing	<p>CO1: Develop an understanding of major issues related to international marketing</p> <p>CO2: Enhancing skills in researching and analyzing trends in global markets and in modern marketing practice</p> <p>CO3: Assess organization's ability to enter and compete in international markets.</p>
	Web Designing	<p>CO1: Explain the history of the internet and related internet concepts that are vital in understanding web development.</p> <p>CO2: Discuss the insights of internet programming and implement complete application over the web.</p> <p>CO3: Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet.</p> <p>CO4: Utilize the concepts of JavaScript CSS, XML and identify the environments currently available on the market to design web sites.</p>
	Digital marketing	<p>CO1: Explain the role and importance of digital marketing in a rapidly changing business landscape.</p> <p>CO2: Discuss the key elements of a digital marketing strategy.</p> <p>CO3: Demonstrate practical skills in common digital marketing tools such as SEO, SEM, Social media, Blogs.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Com Honours I Year	Financial Accounting	CO1: To train students about preparation of Financial statements of an Organisation. CO2: To impart knowledge about advance accounting of specific Organisations Like Partnership Accounting, Branch Accounting, Insolvency Accounts.
	Business Mathematics	CO1: Paper acquaint students about general maths required to run any business. CO2: The paper gives the detail knowledge about business mathematics, like Average Ratio, Percentage, Direct and Inverse Proportion along with the simultaneous and quadratic equations.
	Principles of Management	CO1: To Define the Concepts and Functions of Management and Administration. CO2: To appraise the need for Fayol's Principles of Management and the importance of Taylor's Scientific Management with their pros and cons respectively.

Subject	Paper	Course Outcomes
B.Com Honours I Year	Business organization & Communication	CO1: To make them aware about different forms of communication. CO2: To facilitate the knowledge about Trade Association and essential Communication skills required for managing a business.
	Managerial Economics	CO1: This paper presents the principles of economics, demand analysis, market Structure and macro environment and its application in the decision making. CO2: It enables the students to learn the basic principles of economics and its application in the decision making in the business.
	Micro Economics	CO1: This paper helps learners to apply economic thinking and analysis in the context of National economics, monetary and fiscal policy. CO2: The learners will gain knowledge about the key indicators of economic change, growth and development.



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Com Honours II Year	Corporate Accounting	<p>CO1: Provide knowledge about the rules and regulations related with issue of shares & debenture, incorporation and managerial share in company & preparation of final accounts.</p> <p>CO2: Paper gives learning about Management & control of companies, majority powers and minority rights, Corporate accountability, Merger, amalgamation, Winding up proceeding, liquidation of company.</p>
	Advanced Accounting	<p>CO1: This subject would provide an edge over and above the fundamentals of Financial Accounting with In Depth knowledge of the preparation of Financial statements of Banking and Insurance Companies.</p> <p>CO2: Preparation and analysis of the Financial Statements of NPO's and Governmental Organizations Students would be able to demonstrate competent knowledge and application of Accounting techniques.</p>
	Advance Statistics	<p>CO1: The Paper gives learning about simulation in probability and statistical inferences.</p> <p>CO2: Communicate the concept of measure of central tendency, Index numbers, Correlation, regression analysis with various test for testing the Hypothesis like t-test, F-test, ANNOVA.</p>

Subject	Paper	Course outcomes
B.Com Honours II Year	Public Finance	<p>CO1: The learners would develop conceptual clarity about government's revenue and expenditure.</p> <p>CO2: The budgetary deficit and surplus could easily be understood through such study Various terminologies related to taxation, incidence of taxation, tax avoidance, tax evasion, income tax, GST etc. would create a better understanding of government's dealing with direct and indirect taxes.</p>
	Financial Management	<p>CO1: The paper helps in practising financial management with financing, Investing and Dividend decision including short and long goals of the organizations.</p> <p>CO2: Paper gives an insight about tool and techniques used by corporate under Financial management like, Capital Budgeting decision, Capitalisation, Capital Structure, Leverage and cost of capital.</p>
	Marketing Management	<p>CO1: Paper gives the understanding of Marketing Management and core marketing concepts.</p> <p>CO2: Explain the concepts of Product, Product Mix and Appraise the need for Promotion Mix with respective Pros and Cons.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Com Honours III Year	Income Tax	<p>CO1: It enables the students to insights the basics of Income Tax Act 1961 and its implications in computing tax liability of an individual.</p> <p>CO2: To familiar with the computation of taxable income from all the heads of direct income and provide full knowledge about all deductions, exemption and rebates of income Tax.</p>
	Management & Cost Accounting	<p>CO1: The paper gives learning to students about cost and Management accounting which is indispensable discipline for corporate management as the information collected and presented to management.</p> <p>CO2: Gives an idea about the techniques used by corporate to analyse the performance of company by using various tools and techniques of Financial and cost Analysis.</p>
	Indirect Tax	<p>CO1: Able to understand various terms related to GST, Concept of forward charge mechanism, reverse charge mechanism, composite supply and various exemptions under the new Goods and Service tax regime.</p> <p>CO2: Students will be able to compute the amount of CGST, SGST, and IGST payable after considering the eligible input tax credit.</p>

Subject	Paper	Course Outcomes
B.Com Honours III Year	Banking Law & Secretarial Practices	<p>CO1: To enlighten the students' knowledge regarding Banking Regulation Acts.</p> <p>CO2: To give a thorough knowledge on Indian Banking System and Acts pertaining to it.</p> <p>CO3: To provide understanding of nature, importance and structure of banking sector.</p>
	Human Resource Management	<p>CO1: Give insight to Understand acquisition of human resource by Human Resource Planning in evolving Small and Entrepreneurial organization.</p> <p>CO2: Impart Knowledge to Acquire exposure to the concept, principles and the changes occurring in the field of Human Resource Management at the National and International level.</p>
	Research Methodology	<p>CO1: This paper enable the students to learn the importance of the research, various method of analysis of data and its applications in the business management.</p> <p>CO2: To equip the students with the basic understanding of the research methodology and to provide an insight into the application of modern analytical tools and techniques for the purpose of management decision making.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
BBA I Year	Communication Skills	<p>C01: It helps the student to enhance their presentation skills.</p> <p>C02: To gain knowledge on effective preparation of various official documents.</p> <p>C03: To provide an outline to effective organisational communication.</p>
	Business Statistics	<p>C01: To enable the use of statistical, graphical and algebraic techniques wherever relevant.</p> <p>C02: To have a proper understanding of statistical application in Economics and Management.</p> <p>C03: To develop the students' ability to deal with numerical and quantitative issues in business.</p>
	Principles of Management	<p>C01: To Define the Concepts and Functions of Management and Administration.</p> <p>C02: To appraise the need for Fayol's Principles of Management and the importance of Taylor's Scientific Management with their pros and cons respectively.</p> <p>C03: Explain the concept of planning, types of plans, planning process, MBO and pros and cons of planning.</p>

Subject	Paper	Course Outcomes
BBA I Year	Micro Economic	<p>C01: This paper is designed to provide the student with a wide range of analytical skills while at the same time building competence in a particular area.</p> <p>C02: It enables the students to learn the basic principles of economics and its application in the decision making in the business.</p>
	Financial Accounting	<p>CO1: To train students about preparation of Financial statements of an Organisation.</p> <p>CO2: To impart knowledge about advance accounting of specific Organisations Like Partnership Accounting, Branch Accounting ,Insolvency Accounts.</p>
	Business Maths	<p>C01: Understand the basic concepts of set and its types.</p> <p>C02: Explain the concept of linear equation in two variable.</p> <p>C03: Discuss the basic concept of matrix and its types.</p> <p>C04: Understanding of limits, continuity and logarithm.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
BBA II Year	Marketing Management	<p>C01: Define Marketing Management and core marketing concepts, identify the functions of Marketing and discuss the role of Marketing Manager.</p> <p>C02: Explain the concepts of Product, Product Mix, identify product decisions and the implications of PLC.</p> <p>C03: Appraise the need for Promotion Mix with respective Pros and Cons.</p>
	Human Resource Management	<p>C01: To aiming to enable the students in Human Resource Management.</p> <p>C02: To introduce the students about training and placements.</p> <p>C03: Identify the HR needs of an organisation and plan accordingly.</p>
	Organisational Behaviour	<p>C01: To give knowledge about process of group formation, group behavior & various leadership styles in an organization set up.</p> <p>C02: To make the students aware & understand various concepts of organization behavior.</p> <p>C03: To develop the Ability to understand challenges and opportunities in the field of organization behavior.</p>

Subject	Paper	Course Outcomes
BBA II Year	Project Management	<p>C01: To make them understand the concepts of Project Management for planning to execution of projects and to enable them understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation.</p> <p>C02: To enable them to comprehend the fundamentals of contract administration costing and Budgeting.</p>
	Marketing Research	<p>C01: The learners would be able to formulate, organize and analyse a marketing research project. They would primarily understand the structuring of a questionnaire and other methods of data collection.</p> <p>C02: The study of the subject would enable the students to formulate the research hypothesis and apply various tests like chi square, t test and Annona.</p> <p>C03: It will enable an in depth understanding of the prevailing research framework and apply the knowledge to a given research problem</p>

Subject	Paper	Course Outcomes
BBA II Year	Financial Management	<p>C01: The paper helps in practising financial management with financing, Investing and Dividend decision including short and long goals of the organizations.</p> <p>C02: Paper gives an insight about tool and techniques used by corporate under Financial management like, Capital Budgeting decision, Capitalisation, Capital Structure, Leverage and cost of capital.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
BBA III Year	Entrepreneurship Development	<p>C01: The purpose of this paper is that the students acquire necessary knowledge and skills required for organizing and carrying out entrepreneurial activities.</p> <p>C02: This also enables them to develop the ability of analysing and understanding business situations in which entrepreneurs act and to master the knowledge necessary to plan entrepreneurial Studying this paper prepares graduates for a wide range of careers in the business world.</p>
	Business Environment	<p>C01: It will enable the learners to acquire in depth knowledge about various environments like political, legal, social etc. such study would create awareness about modern day challenges related to entrepreneurship.</p> <p>CO2: Helps to examine the rapid pace of technology and how India is integrating with the world economy in technological aspects.</p>

Subject	Paper	Course Outcomes
BBA III Year	Business Law	<p>C01: Understand the concept of Agreement, Contract, essentials and classification of Contracts.</p> <p>C02: Examine the circumstances and the object can be considered unlawful and void.</p> <p>C03: Discuss the provisions relating to sale of goods act – contract of sale, conditions and warranty.</p>
	Management Information System	<p>C01: The students understand the leadership role of Management Information Systems in achieving business competitive advantage through informed decision making.</p> <p>C02: Analyze and synthesize business information and systems to facilitate evaluation of strategic alternatives.</p> <p>C03: The students will be able to understand the management and exploitation of information systems and the use of broader information and communication technologies.</p> <p>LO4. The student will learn about the information technologies how they influence the structure & processes of organizations and economies as well as the roles and techniques of management</p>

Subject	Paper	Course Outcomes
BBA III Year	Consumer Behaviour	<p>C01: To enable the students understand behaviour patterns of Consumer.</p> <p>C02: To elaborate the considerations for consumer decision making.</p> <p>C03: To enable the students about a relationship between the culture, sub-culture, peer group, family influence and consumer behaviour.</p> <p>C04: To enable the students to understand the theories of personality, consumer attitude and perception Of consumers.</p>
	Advertising Management & Sales Promotion	<p>C01: To make the students aware for advertising and different marketing strategies for product.</p> <p>C02: To make students enable to create their own advertising campaign.</p> <p>C03: To make the students understand how to communicate with target audience.</p> <p>C04: To impart knowledge and awareness about legal, ethical and social responsibility of advertisers.</p>
	Wages and Salary Administration	<p>C01: To understand the salary structure and pay determination of employees.</p> <p>C02: To know the equitable wage and salary system of different types of organisation.</p> <p>C03: To analyse, integrate and apply the knowledge to solve compensation related problem in organisation.</p>

Subject	Paper	Course Outcomes
BBA III Year	Human Resource Development	<p>C01: To understand the concepts of organisational learning and developing core competencies by implementing HRD practices.</p> <p>C02: To deliver the idea and relevance of qualitative HR practises in the field of training and development.</p> <p>C03: To learn to gain competitive advantage through people.</p>
	Corporate Taxation	<p>C01: It enables the students to insights the basics of Income Tax Act 1961 and its implications in computing tax liability of an individual.</p> <p>C02: To familiar with the computation of taxable income from all the heads of direct income and provide full knowledge about all deductions, exemption and rebates of income Tax. And Corporate tax.</p>
	Working Capital Management	<p>C01: Paper helps in evaluate comparative working capital management policies and their impact on the firm's profitability, liquidity, risk and operating Flexibility.</p> <p>C02: Gives an insight about the importance of effective working capital management and its role in meeting the firm's objectives.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Com I Sem	Management Concepts	<p>CO1: To enable the students analyze the implementation of different functions of management.</p> <p>CO2: To develop the Ability in students to execute managerial tasks of planning, organizing and controlling.</p> <p>CO3: To make Understanding of different styles of leadership and its impact on decision making process among students.</p> <p>CO4: Students will aware the role &</p>
	Business Environment	<p>CO1: It will enable the learners to acquire in-depth knowledge about various environments like political, legal ,social etc. such study would create awareness about modern day challenges related to entrepreneurship.</p> <p>CO2: Helps to examine the rapid pace of technology and how India is integrating with the world economy in technological aspects.</p>

Subject	Paper	Course Outcomes
M.Com I Sem	Advance Accounting	<p>CO1: Students able to learn various advanced accounting concepts and its Practical approach.</p> <p>CO2: Paper gives knowledge about Theoretical foundation of Accounting and Accounting Standards. How to solve problems relating to Company Accounts, Valuations and special types of situations. How to prepare Statement of affairs including deficiency /surplus account.</p>
	Cost Analysis & Control	<p>CO1: A thorough understanding of the various Cost Concepts.</p> <p>CO2: Calculation of per unit cost of products involving several process.</p> <p>CO3: In depth knowledge of Inventory Control Techniques and Labour Payments System.</p> <p>CO4: Setting up of standards for costs and variance analysis for an efficient costing system.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Com II Sem	Corporate Legal Framework	CO1: Explain the students the statutory control and legal framework within which the business operates as a company. CO2: Define the salient features of Consumer Protection Act and functioning of Redressal Machinery. CO3: Elaborate on the importance of regulatory environment in International business.
	Organisational Behaviour	CO1: To discuss the development in the field of organizational Behaviour. CO2: To explain organizational culture and describe its dimensions.

Subject	Paper	Course Outcomes
M.Com II Sem	Advanced Statistical Analysis	<p>CO1: Student will able to Understand and appreciate the need to solve a variety of business related problems using a systematic approach involving accepted statistical techniques.</p> <p>CO2: Student will able to independently calculate basic statistical parameters (mean, measures of dispersion, correlation coefficient, indexes)</p> <p>CO3: Student will able to explain probability theory and probability distributions in relation to general statistical analysis</p>
	Functional Management	<p>CO1: It helps the students to understand the concept & Importance of Functional Management.</p> <p>CO2: To make the students aware about the functional areas in Management.</p> <p>CO3: To give knowledge about financial management, marketing management, Personnel Management & Production Management.</p> <p>CO4: To give knowledge about other Managerial Functions.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Com III Sem	Managerial Economics	CO1: This paper presents the principles of economics, demand analysis, market structure and macro environment and its application in the decision making. CO2: It enables the students to learn the basic principles of economics and its application in the decision making in the business.
	Tax Planning & Manageme nt	CO1: To provide full knowledge about Income Tax Act 1961. CO2: To impart knowledge of Tax Planning according to the nature, location & different forms of business entity. CO3: To gain the knowledge of Tax Planning in dividend, capital structure CO4: To perceive the concept of Tax Management.

Subject	Paper	Course Outcomes
M.Com III Sem	Entrepreneurship Skill Development	<p>CO1: The purpose of this paper is that the students acquire necessary knowledge and skills required for organizing and carrying out entrepreneurial activities.</p> <p>CO2: This also enables them to develop the ability of analysing and understanding business Situations in which entrepreneurs act and to master the knowledge necessary to plan entrepreneurial set-up.</p> <p>CO3: Studying this paper prepares graduates for a wide range of careers in the business world.</p>
	Accounting For Managerial Decisions	<p>CO1: Paper gives learning about Use business finance terms and concepts when communicating. Explain financial concepts used in making accounting management decision. Effective communication skills to promote respect and relationship for financial deals.</p> <p>CO2: To know the basics of management accounting and financial statement analysis with fund flow cash flow statement, budget and marginal costing.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Com IV Sem	Advertising & Sales Management	<p>CO1: To help students Understand fundamental Advertising concepts & theories.</p> <p>CO2: To Prepare students for the various career opportunities in the field of Advertising & Marketing.</p> <p>CO3: To give knowledge about legal, ethical and social aspects of Advertising.</p> <p>CO4: To give insight about the Media, its types & Others important tools of Marketing.</p>
	Consumer Behaviour	<p>CO1: In this paper student will examine both concepts and applications of individual buyer (and industrial buyer) behaviour by determining how the customer reacts in the marketplace to various marketing strategies of the firm.</p> <p>CO2: To develop an understanding of peoples' consumption-related behaviours and to develop and evaluate marketing strategies intended to influence those behaviours.</p>
	Rural & Agricultural Marketing	<p>CO1: To Gain conceptual knowledge about rural marketing with special reference to Indian context.</p> <p>CO2: Acquaint with various functional areas of agriculture.</p> <p>CO3: Know about consumer behaviour and trends in rural marketing.</p>

Subject	Paper	Course Outcomes
M.Com IV Sem	International Marketing	<p>CO1: Evaluate and integrate a wide range of management concepts focussing on the international marketing tasks facing the firm and Identifying courses of marketing action.</p> <p>CO2: Develop international marketing strategies for consumer products firms, industrial products firms, Service providing firms.</p> <p>CO3: Explaining the international marketing strategies selected through suitable methods of pricing and distribution supported by appropriate international marketing negotiations strategies.</p>
	Cost Administration & Control	<p>CO1: Application of Marginal Costing Technique for Managerial Decision Making and Break Even Analysis.</p> <p>CO2: Techniques of Cost Reduction and Cost Control.</p> <p>CO3: Preparation of Budget Manuals for an efficient Costing system including ZBB and Performance Budgets.</p> <p>CO4: Overall Total Quality Management (TQM) in costing therefore preparing professional Cost Accountants.</p>

Subject	Paper	Course Outcomes
M.Com IV SEM (Accounting Specialisation)	Accounting Theory	<p>CO1: The Paper gives the Understanding of the history of accounting standard-setting in the United States, and apply this history when explaining the current standard-setting environment. Discuss Generally Accepted Accounting Principles in relation to a variety of controversial accounting issues.</p> <p>CO2: Understand and demonstrate how financial reporting choices affect economic decisions of investors, creditors, and others. Demonstrate how and why companies try to "manage" earnings, and the consequences of such earnings manipulation practices. Gives detail about the impact of recent legislation, accounting and auditing standards on the future of the accounting profession.</p>
	Institutional Accounting	<p>CO1: Describe and define the nature of accounting in governmental and not-for-profit organizations, Evaluate and Analyze the financial statements of governmental and not-for-profit organizations.</p> <p>CO2: Develop in students the ability to research and solve unstructured problems in governmental and Not-for-profit accountings.</p>

**DEPARTMENT
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SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. F&N I Year	Basic Nutrition & Commodities	<p>CO1: To describe the requirements of normal and clinical nutrition and apply these to the care of clients and the functioning of a food service department or operation.</p> <p>CO2: To participate in promoting food and nutrition services and healthy living to support the general well-being of individuals.</p>
	Physiology & Biochemistry	<p>CO1: To study basic science subjects relating to the human body in order to prepare students to understand the role of food in health and disease.</p> <p>CO2: To understand how processing of food happens in the body to utilise food for its various functions.</p> <p>CO3: To learn about food and its nourishing effects.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. F&N II Year	Family Meal Management & Community Nutrition	<p>CO1: To understand meal management and the nutritional requirements of communities. Students learn about food guides for selecting adequate diets.</p> <p>CO2: To define terminology & demonstrate the role of effective meal planning.</p> <p>CO3: To contribute to the analysis of food and nutrition processes, systems and operations, and the implementation and evaluation of changes to support continuous improvement.</p> <p>CO4: To support action for change that promotes social, economic, and ecological equity at personal and global levels.</p>
	Food Service Management & Accountancy	<p>CO1: To enhance students' knowledge of and performance in areas including food service, business, human resource management, quality management, and nutrition and diet therapy.</p> <p>CO2: To identify and demonstrate the skills, behaviours, roles, and beliefs regarding effective leadership as a professional food service nutrition manager within an organization.</p> <p>CO3: To describe the importance, and integration of financial management considerations in the development and execution of food service operations.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. F&N III Year	Advanced Clinical Nutrition & Dietetics	<p>CO1: To impart the knowledge of nutrition to maintain health in disease conditions, i.e., dietetics.</p> <p>CO2: To plan menus to accommodate the nutritional, dietary and medical needs, cultural and religious requirements, and personal preferences of clients.</p> <p>CO3: To encourage, through classroom instruction and work placements, the discovery of how long-term care facilities, retirement homes, hospitals, day-care centres, school cafeterias and commercial catering, such as airline food services provide their patients, residents, and customers with nutritious food.</p>
	Food Microbiology, Sanitation & Hygiene	<p>CO1: To provide students with information on basic microbiology, safety, personal hygiene, and general handling of food. Local legislation for the food service industry will be examined.</p> <p>CO2: To provide students with the opportunity to discuss how contamination of food can occur in a food service establishment.</p> <p>CO3: To describe the effect and consequences of food-borne illness, and display sound practices to prevent the possibility of food poisoning.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. F&N I Sem	I - Applied Physiology	CO1: To understand the integrated functions of all systems in the science of physiology. CO2: To understand the structure & functions in various organs & systems in relation to the diseased conditions. CO3: To understand the advance issues to the relevant topics of human physiology.
	II - Advanced Nutritional Biochemistry	CO1: Augment this biochemistry knowledge acquired at the undergraduate level. CO2: Understand the mechanism adopted by the human body for regulation of metabolic pathways. CO3: Get on inside into interrelationship between various metabolic pathways. CO4: Become proficient for specialization in nutrition. CO5: Understand integration of cellular level metabolic events to nutrition disorder & imbalances.

Subject	Paper	Course Outcomes
M.Sc. F&N I Sem	III - Public Nutrition	<p>CO1: Develop a holistic knowledge base & understanding of public nutrition concept.</p> <p>CO2: Understand the health economic, food situations & determinations of nutritional status.</p> <p>CO3: Be familiar with various approaches to nutrition & health interventions, programmes & policies.</p>
	IV - Research Methods & Statistics	<p>CO1: To understand the significance of statistics & research methodology in home science research.</p> <p>CO2: To understand the types, tools, methods of research & develop the ability to construct data gathering instrument appropriate statistical technique for the measurement & design.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. F&N II Sem	I-Advances in Food Microbiology	CO1: The course will enable the students to gain deeper knowledge of microorganism in human environment & to understand the importance of microorganism in food technology. CO2: To understand legal aspects in the areas. CO3: To develop skills in handling food safety. CO4: To know the food borne diseases & how to prevent it.
	II-Applied Biochemistry & Technique	CO1: Augment this biochemistry knowledge acquired at the undergraduate level. CO2: Understand the mechanisms adopted by the human body for regulation of metabolic pathways. CO3: Get on inside into interrelationship between various metabolic pathways. CO4: Become proficient for specialization in nutrition. CO5: Understand integration of cellular level metabolic events to nutrition disorder & imbalances. CO6: Familiarise with the application of the above technique.

Subject	Paper	Course Outcomes
M.Sc. F&N II Sem	III-Nutrition & Health Problems	<p>CO1: Understand the nature of important nutrition problems & their prevention & control.</p> <p>CO2: Study & understand the epidemiology of communicable disease & nutrition related problems prevalent among the affluent & the less privileged groups.</p> <p>CO3: Study the biochemical & clinical manifestations preventive & therapeutic measure of common nutrition & health problems.</p>
	IV-Statistics & Computer Application	<p>CO1: To understand the role of statistics & computer applications in research.</p> <p>CO2: To apply statistical techniques to research data for analysing & interpreting data meaningfully.</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. F&N III Sem	I - Advanced Nutrition	<p>CO1: Be able to recommend & provide appropriate nutritional care for prevention & treatment of various diseases.</p> <p>CO2: Orient the students with all the important state of the art methodology applied in nutritional assessment & surveillance of human groups.</p> <p>CO3: Develop specific skill to apply the most widely used method.</p>
	II - Dietetics & Therapeutic Nutrition	<p>CO1: Understand the ethology, physiologic & metabolic anomalies of acute & chronic diseases & patient needs.</p> <p>CO2: Know the effect of the various diseases on nutritional status & nutritional dietary requirements.</p> <p>CO3: Be able to recommend & provide appropriate nutritional care for prevention & treatment of various diseases.</p>

Subject	Paper	Course Outcomes
M.Sc. F&N III Sem	III - Food Science	<p>CO1: Provide composition of various food stuffs and familiarize with changes as a result of processing.</p> <p>CO2: Enable students to use theoretical knowledge in various application and commercial food preparation.</p> <p>CO3: Create awareness regarding current trends, issues and researches in various aspects of food and nutrition.</p>
	IV – Issues Related To Women's	<p>CO1: Provide knowledge of situation of women in present society and determining factors of it.</p> <p>CO2: Orient the students about the women empowerment schemes and policies provided by Indian Govt. and International agencies.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. F&N IV Sem	I Health & Nutrition	<p>CO1: Understand the components of health & fitness & the role of nutrition in these.</p> <p>CO2: Make nutritional dietary & physical recommendations to achieve fitness & well-being.</p> <p>CO3: Develop ability to evaluate fitness & well-being.</p>
	II Clinical Nutrition & Therapeutic Nutrition	<p>CO1: Understand the etiologic, physiologic and metabolic anomalies of acute and chronic diseases and patient's need.</p> <p>CO2: Know the effect of various diseases on nutritional requirement and nutritional status of patient and be able to recommend and provide appropriate nutritional care for prevention and treatment of them.</p> <p>CO3: Orient the students with all the important state of art methodology applied in Nutritional assessment and surveillance of human groups and develop specific skills to apply the most widely used methods.</p>

Subject	Paper	Course Outcomes
M.Sc. F&N IV Sem	III Food Science	<p>CO1: Provide composition of various food stuffs and familiarize with changes as a result of processing.</p> <p>CO2: Enable students to use theoretical knowledge in various application and commercial food preparation.</p> <p>CO3: Create awareness regarding current trends, issues and researches in various aspects of food and nutrition.</p>
	IV Issues Related to Women Child & Elderly	<p>CO1: Provide knowledge about the nutrition of women, children and elderly and several issues related to them which indirectly affect women.</p> <p>CO2: Gives idea about the developmental changes occurs during the course of lifecycle and prepares the students to bring changes in their approach to resolve them.</p>

**DEPARTMENT
OF
BIOTECHNOLOGY**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Biotech I Year	Cell structure & Biology	CO1: Students will understand the detailed structure and functions of different organelles of cell. CO2: Get to know an overview about the transport across membrane, mitosis and meiosis
	Microbiology	CO1: This paper will gave an insight to the students about the Microbial world, their classification, taxonomy, microbial diversity, mode of nutrition and structures of different microbes. CO2: Understand concept of sterilization, microbial growth, Fermentation
	Laboratory	CO1: Learn basic Microscopic and Microbiological techniques.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Biotech II Year	Biophysics and Biochemistry	CO1: Understand the fundamentals of Biochemistry, General Biophysical methods and thermodynamics. CO2: Will get to know about the Macromolecules of life and the enzyme system.
	Bioinstrumentation, Biostatistics and Bioinformatics	CO1: Students will get to know about the principle, working and applications of different instruments used in biotechnology. CO2: Will get the knowledge about computer, MS-Office, Graph designing and calculation using Excel and Data interpretation and analysis using Bioinformatics tools.
	Laboratory	CO1: Learn about Chromatographic techniques, qualitative and quantitative estimations of sugars, proteins and amino acids. Will do practical's related to blood analysis too.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Biotech III Year	Molecular Biology & Genetic Engineering	CO1: Understand the notion of Mendelian Genetics and Recombinant DNA Technology. CO2: Conceptualise the process of Replication transcription and translation. Will Learn about the concept of origin of life.
	Applied Biotechnology	CO1: Students will get the overview about the different fields associated with biotechnology like microbial biotechnology, plant and animal biotechnology, immunology and fermentation Technology.
	Laboratory	CO1: Learn about Basic Molecular Biology techniques.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Biotech I Sem	Cell Biology	CO1: The students will be able to understand the structure and function of cell & its various organelles. CO2: They will be able to understand the process of cell division and hormonal Regulation. CO3: Will make them understand the different signal transduction pathways.
	Structure, Function and metabolism of Biomolecules	CO1: The students will get to know about the macromolecules, their structure and functions. CO2: The different biochemical pathways involved in the synthesis of carbohydrates, CO3: Proteins, Nucleic acids and Lipids.
	General & Applied Microbiology	CO1: The students will be able to understand microbial diversity, physiology, Evolution and nutrition. CO2: Characterization and identification of Microbes at macroscopic, microscopic and molecular level.

Subject	Paper	Course Outcomes
M.Sc. Biotech I Sem	Bioinstrumentation	<p>CO1: The students will get the knowledge about the different instruments used in Practical's and Research in Biotechnology.</p> <p>CO2: They will get to know about the Principle, working and applications of different instruments.</p>
	Laboratory-I	<p>CO1: Students will learn the handling of Equipment's, preparation of Reagents and Various Microbial techniques, Qualitative and Quantitative Estimations, Sterilization methods etc.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Biotech II Sem	Molecular Genetics	CO1: The students will be able to understand Concept of Genes & Genetics. CO2: They will be able to understand Microbial Genetics and the concept of Mutation and their types. Also the Molecular Basis of cancer.
	Basic Enzymology & Enzyme Technology	CO1: The students will get to know about the Different types of Enzymes, their structure and functions. CO2: The Kinetics of Enzymes and their mode of action.
	Molecular Biology	CO1: The students will get the knowledge Structure of nucleic acids and its types. CO2: They will get to know Mechanism of Replication, Transcription and Translation as well as Gene Regulation.

Subject	Paper	Course Outcomes
M.Sc. Biotech II Sem	Immunology and Animal Cell Culture	CO1: The students will get the knowledge about the concept of Immune system, the cells and the organs Involve. CO2: This paper will enrich the Knowledge about the mechanism of Immune system-How it works? CO3: It will also give understanding about the Animal Cell Culture General and various Specialised Techniques.
	Laboratory-II	CO1: Students will learn Different molecular biology techniques as well as immune diagnostic assays along with some Genetics based practicals.



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Biotech III Sem	Genetic Engineering	CO1: Understand Recombinant DNA technology, Isolation, Sequencing & Synthesis of Genes. CO2: Understand Molecular Probes, Markers and DNA Chip Technology.
	Biostatistics and Bioinformatics	CO1: Comprehend the utility of tools & Databases available in genomics & proteomics. CO2: To Understand the statistical analysis of Research data collected.
	Plant Biotechnology	CO1: To learn about the plant tissue culture techniques. CO2: Understand about the transgenic plants, GMO's, IPR & IPP- Patenting

Subject	Paper	Course Outcomes
M.Sc. Biotech III Sem	Bioprocess and Biochemical Engineering	CO1: Students will learn about the Ferment or, their design, types, working. Component parts of fermentation.
	Applied Biotechnology	CO1: Aseptic conditions required, kinetics of product formation, Heat transfer and Mass transfer.
	Laboratory-III	CO1: Students will understand the applied applications of Biotechnology in the area of Food, Environment, agriculture, medicine etc.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Biotech IV Sem	Dissertation	CO1: Learn how to collect, read and manage research information. CO2: Plan experiments, conduct & observe results. CO3: Write and publish results effectively.
	Advances in Fermentation and Food Technology	CO1: Understand the stereochemistry of fermentation and protein engineering in food technology. CO2: To learn the concept of food spoilage, preservation, food safety at industrial level.
	Applied Immunology and Immunodiagnostics	CO1: The students will get the knowledge about the concept of Immune system, the cells and the organs Involve. CO2: This paper will enrich the Knowledge about the mechanism of Immune system-How it works? Will give an insight about the Diagnostic techniques in Immunology.

Subject	Paper	Course Outcomes
M.Sc. Biotech IV Sem	Principles of Drug designing	CO1: Comprehend the concept of drug discovery & development. CO2: Will make them understand about the stereochemistry, receptors and thermodynamics of Drug designing.
	Training/Survey/ Visit in a private industry/treatment plant or lab at national or regional level for one month.	CO1: Plan experiments, conduct & observe results. CO2: Understand the working of different Industries/ treatment plants.
	Laboratory-IV	CO1: Students will perform practicals based on immunology and food technology.

Subject	Paper	Course Outcomes
M.Sc. Biotech IV Sem	Dissertation	CO1: Learn how to collect, read and manage research information. CO2: Plan experiments, conduct & observe results. CO3: Write and publish results effectively.
	Advances in Fermentation and Food Technology	CO1: Understand the stereochemistry of fermentation and protein engineering in food technology. CO2: To learn the concept of food spoilage, preservation, food safety at industrial level.
	Applied Immunology and Immunodiagnostics	CO1: The students will get the knowledge about the concept of Immune system, the cells and the organs Involve. CO2: This paper will enrich the Knowledge about the mechanism of Immune system-How it works? Will give an insight about the Diagnostic techniques in Immunology.

**DEPARTMENT
OF
CHEMISTRY**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Chemistry I Year	Physical Chemistry	<p>CO1: To understand Thermodynamics – Ist IInd Law, along with Carnot Theorem, Gibbs and Helmholtz functions and Hess's Law.</p> <p>CO2: To clear concepts about Phase Equilibrium, basic terms – 1 and 2 component system.</p> <p>CO3: Brief knowledge about Electrochemistry with Ostwald's Dilution Law, Khohlrausch Law and DHO theory.</p> <p>CO4. Basic knowledge about Surface Chemistry and Catalyst.</p>
	Inorganic Chemistry	<p>CO1: To study about first, second and third transitions series.</p> <p>CO2: To study about Co-ordination chemistry with basic terms, Werner's theory and Valence Bond theory.</p> <p>CO3: To develop a problem solving aptitude for Oxidation, Reduction with Forts, Latimer diagrams.</p> <p>CO4: To study Chemistry of Lanthanide and Actinides Elements.</p>
	Organic Chemistry	<p>CO1: To embarsh a detailed knowledge, Electromagnetic spectrum of ultra-violet spectroscopy with Hooke's Law and effect of conjugation.</p> <p>CO2: To gain an understanding about preparation, structure of different Carboxylic Acid, and Phenol.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Chemistry II Year	Inorganic Chemistry	<p>CO1: To know the discovery of electron, proton and neutron with different laws.</p> <p>CO2: To understand the Chemical bonding along with hybridisation ionic bond and weak Vander waal forces.</p> <p>CO3: To understand the periodic properties and significance of atomic no and electronic configuration as the basic for periodic classification.</p> <p>CO4: To classify elements into a s, p, d and f blocks and learn their main characteristics.</p>
	Physical Chemistry	<p>CO1: To study about Basic mathematical concept and gaseous state.</p> <p>CO2: To Understand about SOLID and LIQUID state with their classification and different laws.</p> <p>CO3: To embark knowledge about chemical kinetic with first, second and third order of reaction.</p> <p>CO4: Knowledge about Nuclear Chemistry.</p>
	Organic Chemistry	<p>CO1: To understand the concept of organic reactions mechanism.</p> <p>CO2: To recognize the type of organic reactions.</p> <p>CO3: To help gain a brief understanding about Alkanes, Alkenes, Alkynes</p> <p>CO4: To understand about organic Stereochemistry with basic term used in stereochemistry</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Chemistry III Year	Physical Chemistry	CO1: To understand about Elementary quantum mechanics based on molecular orbital theory with Bohr's and Heisenberg uncertainty principal. CO2: Brief knowledge about Spectroscopy like Microwave, Infra-Red, Raman and electronic spectroscopy. CO3: To study about Photochemistry.
	Inorganic Chemistry	CO1: Complete study of HSAB and study about Silicones and Phosphazenes. CO2: To study about Metal ligand Bonding in transition metal complexes with Crystal Field theory. CO3: Electronic and magnetic properties of transition metal complexes along with TERM SYMBOL and ORGEL DIAGRAM.
	Organic Chemistry	CO1: Study about NMR Spectroscopy. CO2: To understand about organometallic compound. CO3: Brief knowledge about carbohydrates, Amino Acid, Fat, Protein and Heterocyclic compound with their synthesis, physical, chemical and structural properties.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Chemistry I Sem	Inorganic Chemistry	CO1: Stereochemistry and bonding in main group elements chemistry. CO2: To understand reaction mechanism of transition Metal Complex. CO3: To understand HSAB theory. CO4: Draw the geometrical and optical isomerism of complexes.
	Organic Chemistry	CO1: Understanding nature of bonding and stereochemistry. CO2: To understand conformational analysis and linear free energy relationship. CO3: Discuss kinetics, mechanism and stereochemistry of SN1 and SN2 reactions.
	Physical Chemistry	CO1: Introduction to exact quantum mechanical result. CO2: Know about collision theory. CO3: Solve the Gibbs and Onsager's Reaprecity. CO4: To understand about Over potential and Gouy Chapman mode.

Subject	Paper	Course Outcomes
M.Sc. Chemistry I Sem	Group theory and spectroscopy	Detailed knowledge about: CO1: Microwave spectroscopy. CO2: Infra-red spectroscopy. CO3: Raman spectroscopy. CO4: Uv and photoelectron spectroscopy.
	Biology for Chemists	CO1: To understand about cell structure and functions. CO2: To analyse carbohydrates, lipids, amino acids and nucleic acid.
	Maths for chemist	CO1: To solve the problems of vectors & Matrix Algebra. CO2: Basic solves the problem of differential calculus & integral calculus. CO3: Solve the problem of elementary differential equations permutation probability with different equation & theorems.



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Chemistry II Sem	Inorganic Chemistry	CO1: Understand the electronic spectra of transition metal complexes with Orgel and Tanabo Sugano Diagrams. CO2: learn the properties of transitional metal Complexes CO3: Study the metal pie cluster complexes. CO4: Understand the Optical Rotator Dispersion and Circular Dichroism.
	Organic Chemistry	CO1: Learn SN1, SN2 and SNi Mechanism and Stereochemistry. CO2: Learn classical and non-classical Carbocation, NGP by pi and sigma bonds .and Free radical Reaction. CO3: Learn addition reaction and carbon -Hetero Multiple bonds. CO4: Distinguish between type of addition, elimination and substitution reaction. CO5: Learn about Pericyclic Reaction.

Subject	Paper	Course Outcomes
M.Sc. Chemistry II Sem	Physical Chemistry	<p>CO1: Understand about chemical dynamics with photochemical and thermodynamic reactions.</p> <p>CO2: learn about surface chemistry different theories along with Micelles</p> <p>CO3: To learn about Macromolecules and non-equilibrium thermodynamics reactions.</p> <p>CO4: To learn about electrochemistry solution Debye-Huckle-Onsager and semiconductor interfaces theory.</p>
	Spectroscopy II And Diffraction Methods	<p>CO1: To learn about nuclear magnetic resonance spectroscopy with ^{13}C, ^{19}F, ^{31}P, FTNMR.</p> <p>CO2: To learn about nuclearquaderpole and electron span resonance spectroscopy.</p> <p>CO3: To study about ex-ray diffraction.</p>
	Computer For Chemistry	<p>CO1: Brief knowledge about computer and computing.</p> <p>CO2: To understand the computer programming in FORTRAN/BASIC/C.</p> <p>CO3: To understand programming in chemistry and use of computer program and internet.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Chemistry III Sem	Application of spectroscopy	<p>CO1: Study ^1H NMR Spectroscopy: Chemical Shift, deshielding, correlation for protons bonded to carbon and other nuclei.</p> <p>CO2: Study of ^{13}C NMR spectroscopy: FT- NMR, type of ^{13}C NMR spectra, proton decoupled, off resonance, APT, INEPT, DEPT, Chemical shift, nuclear and hetero nuclear coupling constant.</p> <p>CO3: 2D NMR techniques: COSY, homo and hetero nuclear 2D resorts spectroscopy, NOESY and the applications.</p> <p>CO4: Study of mass spectrometry: Instrumentation.</p> <p>CO5: Study of Electronic spectroscopy; d1-d9 tetrahedral and octahedral and square planner complex.</p>
	Photo Chemistry	<p>CO1: Study of photochemistry: Carbonyl compounds, alkenes, dienes, polyenes and aromatic compounds.</p> <p>CO2: Study photo rearrangement Barton reaction, application of photochemical reaction.</p> <p>CO3: Learn Pericyclic reaction: Electro cyclic, Cycloaddition, and Ene Reaction.</p>

Subject	Paper	Course Outcomes
M.Sc. Chemistry III Sem	Environmental Chemistry	<p>CO1: Demonstrate knowledge of chemical and biochemical principles of fundamental environmental processes in air, water, and soil.</p> <p>CO2: Recognize different types of toxic substances & responses and analyze toxicological information.</p> <p>CO3: Apply basic chemical concepts to analyze chemical processes involved in different environmental problems (air, water & soil).</p> <p>CO4: Describe water purification and waste treatment processes and the practical chemistry involved.</p> <p>CO5: Describe causes and effects of environmental pollution by energy industry and discusses some mitigation strategies.</p> <p>CO6: Explain energy crisis and different aspects of sustainability.</p> <p>CO7: Discuss local and global environmental issues based on the knowledge gained throughout the course.</p>

Subject	Paper	Course Outcomes
M.Sc. Chemistry III Sem	Polymer Chemistry	<p>CO1: Know the importance of polymer and classification of polymers.</p> <p>CO2: Know the reactions of polymers.</p> <p>CO3: Study of polymer characterization by molecular weight concept.</p> <p>CO4: Analysis and testing of polymer by various methods.</p> <p>CO5: Study of Inorganic Polymers.</p> <p>CO6: Application of polymers.</p> <p>CO7: Study of polymers based on phosphorous; phosphazenes and poly phosphates</p>
	Industrial Chemistry	<p>CO1: Know the importance of chemical industry.</p> <p>CO2: Classify various insecticides.</p> <p>CO3: Study the nutritive aspects of food constituents.</p> <p>CO4: Understand the characteristics of some food starches.</p> <p>CO5: Study the manufacture of cement, dyes, Glass, Soap and Detergents by modern methods.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Chemistry IV Sem	Application of spectroscopy	CO1: Study UV Spectroscopy: beer lambert law, UV Bands for carbonyl compounds, dienes and conjugated polyenes by Woodward Fieser rule. CO2: Study of IR spectroscopy: vibrational frequencies alcohols, ketones, aldehyde, amino acids, anhydride, and conjugated carbonyl compounds. CO3: Study of NMR spectroscopy: Paramagnetic substances in solutions. CO4: Study of C13 NMR spectroscopy. CO5: Study of mass spectrometry: Instrumentation.
	Solid State Chemistry	CO1: Study of solid state reactions. CO2: Study of crystal defects and Non-Stoichiometry. CO3: Learn electronic property and band theory. CO4: Study of Organic Solids. CO5: Study of liquid crystals.

Subject	Paper	Course Outcomes
M.Sc. Chemistry IV Sem	Biochemistry	<p>CO1: Students will be prepared for theoretically & practically to understand properties of enzyme.</p> <p>CO2: To identify with the classification and structural properties of carbohydrates, proteins, nucleic acids and lipids, glycoproteins and glycolipids and their significance in biological systems.</p> <p>CO3: Students will understand the structures and purposes of basic components of cell, especially membranes and organelles.</p> <p>CO4: Describe Co-Enzyme chemistry and biotechnological applications of enzymes.</p> <p>CO5: Describe biological cell and its constituent and</p> <p>CO6: Explain biopolymer interactions and cell membrane and transport of ions.</p>

Subject	Paper	Course Outcomes
M.Sc. Chemistry IV Sem	Analytical Chemistry	<p>CO1: To explain the fundamentals of analytical chemistry and steps of a characteristic analysis.</p> <p>CO2: To expresses the role of analytical chemistry in science.</p> <p>CO3: To compare qualitative and quantitative analyses.</p> <p>CO4: To expresses the quantitative and qualitative methods analysis methods.</p> <p>CO5: To evaluate the analytical data in terms of statistics.</p> <p>CO6: To estimates kinds of errors in chemical analysis. And evaluates the effects of systematic errors on analytical results.</p> <p>CO7: To compare the experimental mean with a true value and two experimental means.</p>
	Industrial Chemistry	<p>CO1: Know the importance of cleansing agents.</p> <p>CO2: Classify various insecticides.</p> <p>CO3: Study of cement and ferrous industry.</p> <p>CO4: Understand the characteristics of fertilizers and inorganic materials.</p> <p>CO5: Study the manufacture of cement, dyes, Glass, Soap and Detergents by modern methods.</p> <p>CO6: Classify various insecticides and food additives.</p>

**DEPARTMENT
OF
MATHEMATICS**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Maths I Year	Algebra and Trigonometry	<p>CO1: To learn basic matrix algebra and method to find solutions to system of linear equations also to learn Eigen values and eigenvectors of matrix.</p> <p>CO2: To learn operations on polynomials, finding GCD of two polynomials and roots of polynomials.</p> <p>CO3: Employ De – Moivre’s theorem in a number of applications to solve numerical problems.</p>
	Calculus and Differential Equations	<p>CO1: Apply Taylor’s and Maclaurin’s series for finding series expansions of functions and approximating values and the Leibnitz’s theorem for finding nth derivative of product of two functions.</p> <p>CO2: Acquire the concept of asymptotes and envelopes.</p> <p>CO3: The students will be able to understand the genesis of ordinary differential equations and learn various techniques of getting exact solutions of solvable first order differential equations.</p>
	Vector Analysis and Geometry	<p>CO1: Enquire the basic knowledge of vector differentiation and vector integration.</p> <p>CO2: Students will realize importance of Green, Gauss and Stokes’ theorems in other branches of mathematics.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Maths II Year	Abstract Algebra	<p>CO1: The students will understand the basic concepts of group and their applications.</p> <p>CO2: To learn the significance of the notions of cosets, normal subgroups, and factor groups.</p> <p>CO3: Know the fundamental concepts in ring theory such as the concepts of ideals, quotient rings, integral domains, and fields.</p>
	Advanced Calculus	<p>CO1: Demonstrate an understanding of limits and how they are used in sequences, series.</p> <p>CO2: Geometrical representation and problem solving on MVT and Rolle's Theorem.</p> <p>CO3: Describe the concepts of curvature, evolutes and envelopes of certain curves and understand the proper and improper integrations and evaluate Beta, Gamma functions.</p>
	Differential Equation	<p>CO1: Use the methods of Laplace Transforms and Inverse Laplace Transforms to solve differential equations.</p> <p>CO2: Acquire the idea of Lagrange's method for solving the first order linear partial differential equations.</p> <p>CO3: Recognize the major classification of PDEs and the qualitative differences between the classes of equations.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Maths III Year	Linear Algebra & Numerical Analysis	<p>CO1: Recognize the concepts of the terms span, linear independence, basis, dimension, and apply these concepts to various vector spaces and subspaces.</p> <p>CO2: Understand the concept of linear transformations and their properties and learn inner product spaces and determine orthogonality in inner product spaces.</p> <p>CO3: Using appropriate numerical methods determine approximate solution of ODE and system of linear equation.</p>
	Real & Complex Analysis	<p>CO1: Learn some of the properties of Riemann integrable functions, and the applications of the fundamental theorems of integration.</p> <p>CO2: To equip students with basic mathematical tools such as open & close sets, continuity, connectedness, compactness which can be used to study general topology and real analysis.</p> <p>CO3: To study different tests for solving improper integrals of first and second kind.</p>
	Discrete Mathematics	<p>CO1: Understand Boolean algebra and Boolean functions- DNF & CNF.</p> <p>CO2: Learn about partially ordered sets, lattices and their types.</p> <p>CO3: Assimilate various graph theoretic concepts and familiarize with their applications.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Maths I Sem	Advanced Abstract Algebra – I	<p>CO1: Understanding of normal and subnormal series, Jordan Holder theorem, solvable group and its properties, Nilpotent group and its properties.</p> <p>CO2: Develop the knowledge of extension field, finite extension algebraic and transcendental field.</p> <p>CO3: Knowledge of derivative of polynomial separable and separable extension, perfect field and finite field.</p>
	Real Analysis	<p>CO1: Learn about some of the classes and properties of Riemann integrable functions, and the applications of the Fundamental theorems of integration. Use theory of Riemann–Stieltjes integral in solving definite integrals arising in different fields of science.</p> <p>CO2: Recognize the difference between point wise and uniform convergence of sequences of functions and illustrate the effect of uniform convergence on the limit function with respect to continuity, differentiability, and inerrability.</p> <p>CO3: Know about Cauchy criterion for uniform convergence and Weierstrass M - test for uniform convergence. Functions of several variables, inverse function theorem power series and implicit function theorem.</p>

Subject	Paper	Course Outcomes
M.Sc. Maths I Sem	Topology – I	<p>CO1: Demonstrate an understanding of the concepts of interior, closure, boundary, limit points of subsets, topological spaces, and their role in mathematics.</p> <p>CO2: Understand the core ideas of countability and uncountability. Determine the connectedness and path connectedness.</p> <p>CO3: Learn first, second countable spaces, separable, Lindel of spaces Schroeder-Bernstein theorem and prove Cantor's theorem.</p>
	Complex Analysis – I	<p>CO1: The students will be able to evaluate integrals along a path in the complex plane and understand the statement of Cauchy's Theorem.</p> <p>CO2: Apply Liouville's theorem in fundamental theorem of algebra.</p> <p>CO3: To learn applications of residues and poles in integrals of complex functions.</p>
	Advanced Discrete Mathematics – I	<p>CO1: Understand Algebraic system, Homomorphism and homomorphism congruence relation semi group. Learn about lattices and their types.</p> <p>CO2: Develop knowledge of graph theory, walk, path and circuit. Get knowledge of tree and its properties, distance and centre in a tree spanning tree, rank and nullity.</p> <p>CO3: Demonstrate different traversal method for trees and graph.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Maths II Sem	Advanced Abstract Algebra – II	<p>CO1: Understand and explain the concept of module, sub-module and direct sum of sub-module, finitely generated module, simple module, semi-simple module, free module, Rank module.</p> <p>CO2: Explain the Noetherian and Artinian module and ring, Hilbert Basis theorem.</p> <p>CO3: Understand fundamental structure theorem of modules over a principal ideal domain. Also explain the concept of Algebra of linear transformation in other forms, such as matrices, matrix of linear transformation, and similarity of linear transformation.</p>
	Lévesque Measure and Integration	<p>CO1: Understand basic theory of measurable set, measurable functions, measurability. The function of bounded variation.</p> <p>CO2: Extend the concept of outer measure and integration with respect to a measure. dual spaces, convergence and almost uniform convergence.</p> <p>CO3: Learn and apply Holder and Minkowski inequalities in L^p-spaces and understand completeness of L^p-spaces and convergence in measures.</p>

Subject	Paper	Course Outcomes
M.Sc. Maths II Sem	Topology – II	<p>CO1: The concepts of the separation axioms and Distinguish Urysohn's lemma and the Tietze extension theorem. Learn about basic results about completeness, compactness, connectedness and convergence within these structures.</p> <p>CO2: To Explain Topology and convergence of nets Hausdorffness and nets. Compactness and nets.</p> <p>CO3: Understand the fundamental group, fundamental theorem and covering spaces.</p>
	Complex Analysis – II	<p>CO1: The students will understand the basics of Factorization Theorem.</p> <p>CO2: Students will get extensive knowledge about Riemann zeta function, Harmonic function and Green's function.</p> <p>CO3: Understand the range of an analytic function by using different theorems.</p>
	Advanced Discrete Mathematics – II	<p>CO1: Appreciate the definition and basic of Directed graph along with types and their example.</p> <p>CO2: Understand discrete numeric function and forward, backward difference of numeric functions.</p> <p>CO3: Understand the concept of finite state automata (FSA) and state diagram of an automata</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Maths III Sem	Functional Analysis – I	<p>CO1: To explain normed linear spaces, Banach space, properties of normed and finite dimensional normed linear spaces.</p> <p>CO2: Learn Bounded Linear operators & continuous operators, Non - Linear spaces operators.</p> <p>CO3: Understand bounded linear functional Dual spaces with examples. Hilbert spaces, orthonormal sets and sequence.</p>
	Advanced Graph Theory – I	<p>CO1: Students will be able to appreciate the definition and basics of graphs along with types and their examples.</p> <p>CO2: To learn the concept of trees in detail and algorithms to find minimal spanning trees.</p> <p>CO3: Students will be able to distinguish circuits and cut sets.</p>
	Theory of Linear Operator – I	<p>CO1: Terminology, notation and the basic results and concept of Banach and Hilbert Spaces.</p> <p>CO2: Understanding of main topics of Banach Algebra and Spectral Theory. Properties of resolvent and spectrum.</p> <p>CO3: Learn and Apply Spectral radius of a bounded linear operator on a complex Banach space and explain General properties of compact linear operators.</p>

Subject	Paper	Course Outcomes
M.Sc. Maths III Sem	Operation Research – I	<p>CO1: Develop an understating to scope of Operation research origin and Development of Operation research.</p> <p>CO2: Understand the graphical procedure, graphical solution of properties behaved L.P. problems graphical solution exceptional.</p> <p>CO3: Understand concept of duality definition of primal dual problems general rules for converting any primal into its dual.</p>
	Integral Transform – I	<p>CO1: Students will be able to learn about piecewise continuous functions, Laplace transform of different types of functions, their derivatives and integrations.</p> <p>CO2: To learn the evaluation of Inverse Laplace transform of functions, their derivatives, integrations and application of Convolution theorem.</p> <p>CO3: Students will understand the application to Electrical Circuits.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
M.Sc. Maths IV Sem	Functional Analysis – II	<p>CO1: Discuss about Hilbert ad joint operator and normal operator. Classify operators into self-ad joint, Normal and Unitary operators.</p> <p>CO2: Understand Hahn–Banach theorem for complex linear space and normed linear spaces. Reflexive spaces, Strong and weak convergence.</p> <p>CO3: Describe uniform boundedness principle, open mapping theorem and closed graph theorem.</p>
	Advanced Graph Theory – II	<p>CO1: Acquire a basic idea of digraph, various terms associated and matrix representations of undirected and directed graphs.</p> <p>CO2: To learn about the concept of chromatic partitioning and four color problem.</p> <p>CO3: Understand the notion of planarity, covering and matching of a graph.</p>
	Theory of Linear Operator – II	<p>CO1: Understand the concept of self-ad joint linear operators, compact operators and positive operators, monotone sequence theorem for bounded self – ad joint operators on a complex Hilbert space.</p> <p>CO2: Discuss about Bi–orthonormal system and Spectral properties.</p> <p>CO3: To explain projection operators with applications.</p>

Subject	Paper	Course Outcomes
M.Sc. Maths IV Sem	Operation Research – II	<p>CO1: Understand and solve transformation problems North West corner method, least cost method, Exceptional cases.</p> <p>CO2: Develop understanding to solve assignment problems, mathematical formulation unbalanced assignment problems.</p> <p>CO3: Development an idea of game theory solution by linear programming non-linear programming technique.</p>
	Integral Transform – II	<p>CO1: Familiarize with finite & infinite Fourier transform and Fourier integral.</p> <p>CO2: Understand Parseval's identity for Fourier series & transform and applications of Fourier transforms to boundary value problems.</p> <p>CO3: Students will able to recognize the concepts of Hankel and Mellin transforms.</p>

**DEPARTMENT
OF
BOTANY**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course outcomes
B.Sc. Botany I Year	Diversity of Lower Plants	The student will be able to: CO1: Understand the importance of microorganism. CO2: Know the systematic, morphology and structure, of Algae. CO3: Understand the Biodiversity of Fungi. CO4: Understand the morphological diversity of Bryophytes. CO5: Understand the morphological diversity of Pteridophytes.
	Diversity of Higher Plants	The student will be able to: CO1: Understand the morphological diversity of Gymnosperms. CO2: Understand the life cycle of Cycas, Pinus and Ephedra. CO3: Know the various tissue systems. CO4: Understand the normal and anomalous secondary growth in stem. CO5: Understand the Anatomy of leaf.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Botany II Year	Taxonomy and Embryology of Angiosperm	The student will be able to: CO1: Know the conceptual development of Taxonomy and classifications of Angiosperms. CO2: Understand the characteristics of biologically important families of angiosperms. CO3: Know the floral variations in angiospermic families, their phylogeny and evolution. CO4: Understand Micro-sporogenesis and Megasporogenesis. CO5: Know fertilization, endosperm and embryogenic.
	Plant Ecology, Biodiversity and Phytogeography	The student will be able to: CO1: Know about the Ecosystem and Biogeochemical cycles. CO2: Understand plant communities and ecological adaptations in plants. CO3: Know about conservation of biodiversity and national parks. CO4: Know about soil profile and environmental pollution. CO5: Understand Phytogeographical regions of India.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Botany III Year	Plant Physiology and Biochemistry	<p>The student will be able to:</p> <p>CO1: Understand the plants and plant cells in relation to water.</p> <p>CO2: Understand mineral nutrition and Bio-molecules in plants.</p> <p>CO3: Know about process of Photosynthesis in plants.</p> <p>CO4: Know about Respiration in plants.</p> <p>CO5: Know about Enzymes and Hormones in plants.</p>
	Cell Biology, Genetics and Biotechnology	<p>The student will be able to:</p> <p>CO1: Know about cell structure and cell organelles.</p> <p>CO2: Know about the. Chromosomal organisation, DNA and essential component required for prokaryotic DNA replication.</p> <p>CO3: Know about the Genetic inheritance.</p> <p>CO4: Know about the genomic organization of living organisms, study of genes genome.</p> <p>CO5: Understand the principle and basic protocols for Plant Tissue Culture and Genetic Engineering.</p>

**DEPARTMENT
OF
ZOOLOGY**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Zoology I Year	Invertebrates	CO1: About general taxonomic rules on animal classification. CO2: Familiar with Non Chordates that surrounds us. CO3: Able to identify the invertebrates & classify them with the basis of systematic. CO4: Understand the basis of life processes in the non chordates & recognize the economically important invertebrate fauna.
	Cell Biology & Developmental Biology	CO1: Apply the knowledge of internal structure of Cell, its functions in control of various metabolic functions of organisms. CO2: Ability to observe chromosomal arrangement during cell division.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Zoology II Year	Vertebrates & Evolution	CO1: About general taxonomic rules on animal classification. CO2: Gain Knowledge of functional anatomy of vertebrates from Fishes to Mammals. CO3: About general taxonomic rules on animal classification. CO4: Impart Knowledge regarding various theories of evolution, complex evolutionary processes & animal behaviour of animals. CO5: Knowledge of eras & evolution of species.
	Animal Physiology & Biochemistry	CO1: Interaction & interdependence of physiological & biochemical processes. CO2: Understand the importance of immune system. CO3: Understand the function of various system. CO4: Apply the knowledge to lead healthy life. CO5: Perform procedures as per laboratory standards in the areas of Physiology, Clinical CO6: Science, Tools & techniques of Zoology etc.



SANT HIRDARAM GIRLS COLLEGE, BHOPA

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Zoology III Year	Genetics	CO1: Gain knowledge regarding Human genetics & Heredity. CO2: Distinguish Classical Genetics & Molecular Genetics. CO3: Understand the applications of Biotechnology. CO4: Familiar with the tools & techniques of Genetics & Biotechnology.
	Ecology & Applied Zoology	CO1: Analyse the relationships among animals, plants & microbes. CO2: Understand the application of biological sciences in Apiculture, Aquaculture, Agriculture, Prawn culture, Pearl culture etc. CO3: Gains knowledge regarding ecosystem, Population, various kinds of Adaptations conceptual approach. CO4: Imparts the knowledge to culture animal cells in artificial media.

**DEPARTMENT
OF
PHYSICS**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Physics I Year	Mathematical Physics, Mechanics and Properties of Matter - I	<p>CO1: To understand the basic concepts of mathematical physics, mechanics & properties of matter & to apply them to problems.</p> <p>CO2: Demonstrate quantitative problem-solving skills in all the topics covered.</p> <p>CO3: To understand the basic laws of Classical mechanics and be able to perform calculations using them.</p> <p>CO4: To understand the Special Theory of Relativity.</p>
	Thermodynamics and Statistical Physics-II	<p>CO1: To Know the basic concepts of thermodynamics & its applications in physical situation.</p> <p>CO2: Comprehend the importance of Thermo dynamical functions and applications of Maxwell's relations.</p> <p>CO3: Explain in depth knowledge about statistical physics.</p> <p>CO4: To Understand the basic Ideas about Maxwell Boltzmann, and Fermi Dirac Statistics and their applications and various concept.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Physics II Year	Optics-I	<p>CO1: The students with working knowledge of optical physics and properties of light.</p> <p>CO2: To understand the interference, diffraction and polarization and to solve problems related to the optics phenomena.</p> <p>CO3: To understand about basic concept of laser light and its applications.</p> <p>CO4: To understand the light as energy and how to measure the speed of light, and wavelength of light.</p>
	Electrostatics, Magneto statics and Electrodynamics-II	<p>CO1: To comprehend the importance of Biot Savarts Law and Amperes law and its applications also.</p> <p>CO2: To understand the importance of different magnetization and the boundary condition of magnetic field.</p> <p>CO3: To understand the relevance of context of electromagnetic wave propagation.</p> <p>CO4: To solve complex problems involving linear electrical networks theorems and study in depth the transient current response of CR, LC, CR and LCR circuits.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Physics III Year	Quantum Mechanics and Spectroscopy-I	CO1: The students knowing the basic concept of quantum physics. CO2: To understand the Schrödinger's equation for many systems such as particle in a box, rigid rotator and explain with different quantum numbers. CO3: To study about the Planck's law of radiation. CO4: To understand the structure of atoms, X-ray, Mosley law, different kind of spectra and also study about the nucleus.
	Solid State Physics and Devices-II	CO1: To study in details of crystal structures. CO2: To study about basics electronics technologies. CO3: To understand the modulation and demodulation. CO4: Have gained the principles and uses of nano materials

**DEPARTMENT
OF
MICRO
BIOLOGY**



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Micro Biology I Year	General Microbiology And Cell Biology	<p>The Student Will Be Able To Know:</p> <p>CO1: About What is microbiology its history and its applications?</p> <p>CO2: Classification ultra-structure and characteristics of bacteria.</p> <p>CO3: Classification of fungus there life cycle different type of virus.</p> <p>CO4: Structural organization of cell organelles and cell cycle.</p> <p>CO5: How to isolate microorganism, different type of culture media.</p>
	Tool and techniques in microbiology	<p>The Student Will Be Able To Know :</p> <p>CO1: About What are microscopy different types of microscopy?</p> <p>CO2: How to use various types of microbial instruments'.</p> <p>CO3: What are stain and staining techniques?</p> <p>CO4: What are media and its different types of sterilization techniques?</p> <p>CO5: Biostatics, bioinformatics, data analysis, and computer hardware and software.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Micro Biology II Year	Biochemistry And Microbial Physiology	<p>The Student Will Be Able To know:</p> <p>CO1: Properties' classification and function of carbohydrates lipids and proteins, what is enzyme its nomenclature applications and actives etc.</p> <p>CO2: Microbial growth mathematical expression of growth factor affecting growth.</p> <p>CO3: Different types of the cell cycle, the principle of bioenergetics.</p> <p>CO4: Microbial biosynthesis methods.</p> <p>CO5: Photosynthesis, photochemical reactions, and role of ATP metabolism.</p>
	Microbial genetics and molecular biology	<p>The Student Will Be Able To know:</p> <p>CO1: What is the genetic material of microbes, what is DNA and RNA, and their types?</p> <p>CO2: What are DNA replication and its type?</p> <p>CO3: What is genetic code its hypothesis.</p> <p>CO4: What is recombinant DNA technology, type of bacterial recombination?</p> <p>CO5: What are DNA mutation and DNA repair</p>



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Sc. Micro Biology III Year	Applied and environmental microbiology	The Student Will Be Able To know: CO1: Different type of fermentor, industrial production of alcohols enzyme vitamins and amino acids. CO2: Food spoilage, food preservation, and food storage. CO3: Soil, soil microflora, and use of microbes as bio fertilizer. CO4: About environmental microbes and microbial interactions. CO5: Bioremediation, biodegradation, and sewage treatment.
	Immunology and medical microbiology	The Student Will Be Able To know: CO1: Type of cells in the immune system. CO2: About antigen-antibody and their reaction Tumor immunology. CO3: What are immunization and modern method of vaccines production? CO4: Host microbial reaction, different kind of bacterial and viral diseases.

DEPARTMENT
OF
B.Ed.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Ed. I Sem	Childhood & Growing Up	CO1: To develop the power to interprets how gender, caste and social class may impact the lived experience of children.
	Education in India-Status, Problems & Issues	CO1: To develop an understanding of the brief historical background of Indian Education System
	Language across the curriculum	CO1: The student teacher will comprehend the programme with different levels of Language, strengthening the ability to Read, Think, Discuss, Communicate as well as to Write
	Curriculum Development and School	CO1: To acquaint students with the context of Curriculum development and innovative curriculum models
	Reading and reflecting on the text	CO1: To enable the student teachers to work on the field and make predictions and check their predictions and then to summarise



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Ed. II Sem	Learning and Teaching	CO1: To understand different theoretical perspectives on learning with a focus on cognitive views of learning as well as social/constructivist theories. CO2: To prepare objective based Lesson plans and use them in their internship.
	Pedagogy of School Subject (Part I)	CO1: To acquaint student teachers with the role of teaching aids, textbook and libraries. CO2: To develop skills for using appropriate pedagogical resources in classroom teaching
	Pedagogy of School Subject (Part II)	CO1: To help pupils to acquire basic skills of language teaching. CO2: To realise her responsibilities as language teacher and pursue towards the aims of professional growth
	Language across the curriculum	CO1: To prepare and use instructional materials in teaching. CO2: To plan and execute various scholastic and non-scholastic activities.
	Drama & Art in Education	CO1: To become self-learners, reflective and expressive teachers and collaborative professionals. CO2: To enhance artistic and aesthetic sensibility among learners.



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Ed. III Sem	Pedagogy of a School Subject	CO1: To enable student to respond to a variety of Maxims of teaching. CO2: To develop the teaching skills of student teachers.
	School Internship	CO1: To execute Lesson Plans in actual classroom situation. CO2: To understand and analyse the structure & organisation of school education system.
	Educational Psychology Practical	CO1: To administer Educational Psychology tests protocols properly and safely. CO2: To understand the Mental Health, IQ, Interest, Attitude, Personality, and Adjustment etc. of the Learners.



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
B.Ed. IV Sem	Gender, School & Society	CO1: To enable the student teachers to critically examine the stereotypes and re-think their beliefs.
	Education Technology & ICT	CO1: To understand the applications of Information Technology in the field of Teacher Education programme and training.
	Creating an Inclusive School	CO1: To appreciate the education of learners with special needs.
	Environmental Education	CO1: To develop awareness about the various types of Environmental problems and its conservation.
	Understanding the Self	CO1: To develop the capacity to facilitate personal growth and social skills in their students.
	Understanding of ICT	CO1: To understand the Educational implications of ICT.

FOUNDATION COURSE

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SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
I Year	Hindi	CO1: To recognize & explore the important contribution of India to world literary heritage. CO2: To enhance the thinking capabilities of students which helps in mastering the skills promptly?
	English	CO1: To recognize & explore the important contribution of India to world literary heritage. CO2: To enhance the thinking capabilities of students which helps in mastering the skills promptly?
	Entrepreneurship Development	Learning outcomes: After learning the course the students should be able to CO1: Develop idea generation, creative and innovative skills. CO2: Aware of different opportunities and successful growth stories. CO3: Learn how to start an enterprise and design business plans those are suitable for funding by considering all dimensions of business. CO4: Understand entrepreneurial process by way of studying different case studies and find exceptions to the process model of entrepreneurship.



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COURSE OUTCOMES

Subject	Paper	Course Outcomes
II Year	Hindi	<p>CO1: To elaborate grammatical language which helps to recognize and also develop skills of the students.</p> <p>CO2: To understand traditional value of the society of every century and Era.</p>
	English	<p>CO1: language and culture are closely interlined and therefore English learners will develop their own sensibilities in local context.</p> <p>CO2: Culture along with grammatical knowledge is an essential elements and it boosts the mental level of the students while communicating.</p>
	Environment al Studies	<p>CO1: Impart knowledge to the students regarding environment & conservation biology.</p> <p>CO2: Gains knowledge regarding ecosystem, population conceptual approach.</p> <p>CO3: Understanding of environment conservation process, its importance, pollution control & biodiversity & protection of endangered species.</p> <p>CO4: Understand the application of environment sciences in agriculture & medicines.</p>



SANT HIRDARAM GIRLS COLLEGE, BHOPAL

COURSE OUTCOMES

Subject	Paper	Course Outcomes
III Year	Hindi	<p>CO1: In every culture language are correlated to it who helps the development and person recognition in local art and culture especially found in Madhya Pradesh.</p> <p>CO2: Every student who knows their moral values and human aspects for the developing societies, such great human personality's and their important views which is very helpful for the basic development of the students.</p>
	English	<p>CO1: To recognize & explore the important contribution of India to world literary heritage.</p> <p>CO2: To enhance the thinking capabilities of students which helps in mastering the skills promptly?</p>
	IT	<p>CO1: Understanding the concept of input and output devices of computers and how it works and recognize the basic terminology used in computer programming.</p> <p>CO2: Understanding the use of an operating system and an application program.</p> <p>CO3: Recognize the technological trends of computer networking.</p>

