

PROGRAM OUTCOMES

SR. NO.	PROGRAM NAME	PROGRAM OUTCOMES
1	B.A.	<p>After the completion of the B.A. Program ,the students will be able:</p> <ol style="list-style-type: none"> 1. To develop capabilities of communication skills 2. To understand knowledge in the field of humanities. 3. To be cultured and good citizen of India 4. To get employment 5. To use soft skills 6. To be social and culturally aware 7. To make all round personality development of the learners 8. To develop conscious leaders and problem solvers.
2	B.COM.	<ol style="list-style-type: none"> 1.To understand the principal and areas of management. 2.To acquire entrepreneurship qualities and skills. 3.To understand basic accounting knowledge as applicable to business. 4.To accept the changing role of business in the process of Globalization. 5.To understand basic knowledge of statistical techniques applicable to business. 6.To understand the concepts in Insurance, Banking, Marketing and e-commerce.
3	B.Sc.	<ol style="list-style-type: none"> 1.develop inquiring minds and curiosity about science and the natural world 2.acquire knowledge, conceptual understanding and skills to solve problems and make informed decisions in scientific and other contexts 3.develop skills of scientific inquiry to design and carry out scientific investigations and evaluate scientific evidence to draw conclusions 4.communicate scientific ideas, arguments and practical experiences accurately in a variety of ways 5.think analytically, critically and creatively to solve problems, judge arguments and make decisions in scientific and other contexts 6.appreciate the benefits and limitations of science and its application in technological developments 7.understand the international nature of science and the interdependence of science, technology and society, including the benefits, limitations and implications imposed by social, economic, political, environmental, cultural and ethical factors 8.demonstrate attitudes and develop values of honesty and respect for themselves, others, and their shared environment.
4	BSc(Computer Science)	<p>Computer Science state that degree holders can apply their knowledge and skills, as follows:</p> <ol style="list-style-type: none"> 1.Understand the multiple levels of detail and abstraction 2.Recognize the context in which a computer system may function, including its interactions with people and the physical world. 3.Able to communicate with, and learn from, experts from different domains throughout their careers 1, Possess a solid foundation that allows and encourages them to maintain relevant skills as the field evolves 4.To be able to manage their own career development and advancement ,Manage their own learning and development, including managing time, priorities, and progress

5	B.B.A.	<p>1. Business Knowledge: Students can demonstrate technical competence in domestic and global business through the study of major disciplines within the fields of business.</p> <p>2. Critical Thinking Skills: Students are able to define, analyze, and devise solutions for structured and unstructured business problems and issues using cohesive and logical reasoning patterns for evaluating information, materials, and data.</p> <p>3. Communication Skills: Students are able to conceptualize a complex issue into a coherent written statement and oral presentation.</p> <p>4. Technology Skills: Students are competent in the uses of technology in modern organizational operations.</p> <p>5. Entrepreneurship and Innovation: Students can demonstrate the fundamentals of creating and managing innovation, new business development, and high-growth potential entities.</p>
6	B.C.A.	<p>1. The necessary technical, scientific as well as basic managerial and financial procedures to analyze and solve real world problems within their work domain</p> <p>2. Clarity on both conceptual and application oriented skills in commerce, Finance & Accounting and IT Applications in Business context.</p> <p>3. Improved communication and business management skills, especially in providing tech support.</p> <p>4. Awareness on ethics, values, sustainability and creativity aspects.</p> <p>5. the ability and the mindset to continuously update and innovate.</p>
8	M.A. (ENGLISH)	<p>Students will demonstrate an appropriate level of expertise in literary history, literary theory, and rhetoric.</p> <p>Students will demonstrate high-level proficiency in literary research and in the synthesis of research.</p> <p>Students will demonstrate critical and analytical skills in the interpretation and evaluation of literary texts.</p> <p>Students will demonstrate a command of written academic English, including the abilities to</p> <p>a) organize and present material in a cogent fashion,</p> <p>b) formulate and defend original arguments,</p> <p>c) employ effectively the language of their discipline and write under time constraints.</p>
9	M.Sc.(COMPUTER SCIENCE)	<p>This includes knowledge of the following topics:</p> <p>1. various types of finite automata,</p> <p>2. the formal definitions of programming languages and their connection with automata,</p> <p>3. Turing machines and computability theory, and</p> <p>4. algorithmic complexity classes.</p> <p>5. Research methodology, including basic history of science, the fundamentals of scientific writing, how to give a scientific talk, how to evaluate a scientific paper, and research ethics. Statistical principles, and software tools embodying those.</p> <p>6. Advanced principles and techniques from the elective areas in which the student decided to develop special expertise. Such expertise is developed by following elective courses in the research areas of the members of staff, by means of advanced independent studies, and mainly during the MSc thesis work.</p>
10	P.G.D.C.A.	<p>1. Equips the students with skills required for designing, developing applications in Information Technology.</p> <p>2. Students will able to learn the latest trends in various subjects of computers & information technology.</p>

PROGRAM SPECIFIC OUTCOMES-(BA)

SR. NO.	PROGRAM SPECIFIC NAME	PROGRAM SPECIFIC OUTCOMES
1	MARATHI	1.To understand importance of language in day to day life 2.To undertsand appreciate Marathi literature 3.To learn various forms of marathi literature 4.To get interest in reading marathi literature. 5.To undertsand to creative process and nature of literature 6.To be teacher/professor/translator/writer/reporter/interpretor/editor 7.To know difference formal and internal use of language.
2	HINDI	1.To propogative hindi as national language. 2.To make use of hindi in day-to-day life 3.To know hindi literature and its various forms. 4.To know the difference between formal and informal use of language 5.To develop communication skill in hindi 6.To be teacher in specific language
3	ENGLISH	By the end of course students are expected to: 1) Compute probabilities of standard probability distributions. 2) Compute the expected frequency and test the goodness of fit. 3) Drawing random sample from standard probability distribution and sketch of the p.m.f./ p.d.f. for given parameters. 4). Compute the index numbers. v. Construction of control charts. 5) Knowing the relations among the different distributions with real life situations. 6) Applying the small sample and large sample tests in various situations. 7) Enhanced students linguistic competence. 8) Students enabled to describes object, people and places. 9) Improved writing and speaking skills. 10) Improved literary competence through short stories, poems and essays.
4	HISTORY	1.To get acquainted with the history of Maratha 2.To study the comprehensive history of Chhatrapati Shivaji 3.To understand events of freedom movement of India & the contribution of the freedom fighters. 4.To comprehend the history of world revolution. 5.To understand the role of social reformer. 6.To understans the history of ancient India. 7.To comprehend modern history of maharashtrara. 8.To study of history various countries in the world . 9.To understand the change & impact of revolutionary movement.
5	GEOGRAPHY	1) To acquaint the students with distinct dimensions of India. 2) To understand the physical setup of the country. 3) To focus the climate of India and mechanism of monsoon of India. 4) To get information about soils in India. 5) To get information about vegetation in India.

6	ECONOMICS	<p>The paper Indian Economy deals with the nature and problems of Indian Economy. It also explains the spectral position of the Indian Economy .The silent feature of this paper is that, it revels the nature and impact at new Economic Reforms on the Indian Economy.</p> <ol style="list-style-type: none"> 1. To introduce the students to the Indian economy. 2. To develop an understanding of challenges facing the Indian economy. 3. To acquaint the students with structure of the Indian economy and changes taking place there in. 4. To acquaint the students with the polices and performance of major sectors in Indian Economy. 5. To explain the economic reforms introduced in Indian since,1991.
7	POLITICAL SCIENCE	<p>After completion of B.A in Political Science, the following careers opportunities are available for students.</p> <ol style="list-style-type: none"> 1. Journalism 2. Law 3. Business 4. Political Leader 5. MPSC/UPSC services 6. Political advisors 7. Research in Political Science 8. Elected officials 9. Teaching 10. Post Graduation program in Political Science.

PROGRAM SPECIFIC OUTCOMES-(B.COM.)

SR. NO.	PROGRAM SPECIFIC NAME	PROGRAM SPECIFIC OUTCOMES
1	INSURANCE	<ol style="list-style-type: none"> 1. To Impart the knowledge of the principles of Life Insurance and their importance. 2. To give exposure to the provisions of fire and Marine Insurance and their increasing importance. 3. To provide skill and knowledge to become an insurance Agent. 4. To understand various rules and regulations required for insurance business
3	ACCOUNTANCY	<ol style="list-style-type: none"> 1. Student will demonstrate progressive effective domain development of values, the role of accounting in society and business. 2. Student will learn relevant financial accounting carrier skill, applying both quantitative and qualitative knowledge to their future carrier in business. 3. Student will learn relevant management accounting carrier skill, applying both quantitative and qualitative knowledge to their future carrier in business. 4. Student will be able to demonstrate progressive learning of various tax issue various tax form s relating to individual student will able to demonstrate knowledge in setting up a computerized set of accountancy books. 5. Learners will gain through systematic and subject skill within various disciplines of commerce, business, accounting, economics, finance, auditing, banking and marketing. 6. Learners will be able to recognize future and role of business entrepreneurs, managers, consultants, which will be help learners to posses knowledge and other soft skill and to react aptly when conformed to critical decision making. 7. Learners will able to prove proficiency with the ability to engage in competitive exams like CA, ICWA, CS, and other courses. 8. Learners will acquire the skill like effective communication, decision making, problem solving in day to day business affairs. 9. Learners will involve in various co-curricular activities to demonstrate relevancy of fundamental and theoretical knowledge of their academic major and to gain practical. 10. Learners can also acquire practical skill of work as tax consultant, audit assistant and other financial supporting services. 11. Learners will be able to do higher education and advance research in the field of commerce and finance.
4	BUSINESS ECONOMICS	<ol style="list-style-type: none"> 1.To understand business Economics –Meaning nature etc. Basic concept in Business economics 2.To understand Various important issues in business Economics 3.To understand business concepts – values of money , theories of values of money etc. 4.To understand various issues in macro- economics. 5.Knowing about Indian Economy 6.Knowing about basic concept in world economic environment 7.To understand basic Banking concepts

5	BANKING	<ol style="list-style-type: none">1. To acquaint the students with banking law and practice in relation to the banking system in India2. To develop the capability of students for knowing banking system, regulatory framework banker- customer relationship and banking services.3. To understand the legal aspects of banking transactions and its implications as banker and customer.4. To develop the capability of students for knowing bank nationalization, financial and business performance of banks, central banking and financial markets.5. To acquaint the students with banking law and practice in relation to the banking system in India6. To develop the capability of students for knowing negotiable instruments loans and advances and electronic banking.7. To understand the legal aspects of banking transactions and its implications as banker and customer8. To acquaint the students with banks and financial institutions.9. To develop the capability of students for knowing financial institutions, development banks non-banking financial intermediaries and international banking.
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PROGRAM SPECIFIC OUTCOMES-(B.Sc.)

SR. NO.	PROGRAM SPECIFIC NAME	PROGRAM SPECIFIC OUTCOMES
1	CHEMISTRY	<ol style="list-style-type: none"> 1. To promote understanding of basic facts and concepts in chemistry while retaining the excitement of chemistry. 2. To make student capable of studying chemistry in academic and industrial course. 3. To expose the students to various emerging new areas of chemistry and apprise them with their prevalent in their future studies and their application in various spheres of chemical service. 4. To develop problem solving skill in students. 5. To expose students to different processes used in industries and their applications. 6. To develop ability and to acquire the knowledge of terms, facts, concepts, processes, techniques and principles of subjects. 7. To develop ability to apply the knowledge of contents of principles of chemistry. 8. To acquires new knowledge of chemistry and developments there in. 9. To expose and to develop interest in the field of chemistry. 10. To develop proper attitude towards the subject . 11. To develop the power of appreciation, achievement in chemistry and the role in nature and society. 12. To develop skills required in chemistry such as proper handling of apparatus and chemicals. 13. To acquaint properly with recent instrumental techniques used in industry. 14. To build a personality of student as chemist.
2	PHYSICS	<p>By the end of this course students are expected to be able:</p> <ol style="list-style-type: none"> 1) Appearing for MPSC, UPSC, M. SC. M.C.A. CDS etc. entrance test 2) They can join in different industries like Mikron India, BSNL, MSEB TATA Power. 3) Indian Air force 4) Indian Navy 5) Indian Army 6) Medical Representative 7) As scientist in Indian Institute of Tropical Metrology 8) As Scientist in DRDO 9) In Different Research and development institutes 10) They can join as trainee in Kirloskar Oil and Thermax industries. 11) Technician in wind mills.

3	ZOOLOGY	<ol style="list-style-type: none"> 1. To impart the knowledge of animal science to the pupils. 2. To make the pupils to use the knowledge in their daily life. 3. To make the pupils aware of natural resources and environment. 4. Application of knowledge in Zoology for nutrition, agriculture & live stock. 5. To provide practical experiences which form a part of their learning processes. 6. To develop aptitude for scientific work & ability to pursue studies far beyond graduation. 7. To encourage the pupils to take life science as a carrier which is the need now a days? 8. To make the pupils fit for the society.
4	STATISTICS	<p>By the end of this course students are expected to be able:</p> <ol style="list-style-type: none"> 1) To compute various measure of central tendencies, dispersion, moments, skewness, kurtosis and to interpret the. 2) To analyze data pertaining to attribute and interpret the results. 3) To distinguish between random and non random experiments. 4) To find the probabilities of various events. 5) To compute correlation, coefficient, interpret its value and use in regression analysis. 6) understand concept of multivariate distributions. 7) To apply discrete probabilities distributions studied in this course in different situations. 8) Distinguish between discrete variables and study their distributions 9) To know some standard discrete probability distributions with real life situations.
5	MATHEMATICS	<ol style="list-style-type: none"> 1. Students became aware of concepts in algebra like complex analysis , Matrices etc. They can use these concepts in various examinations . 2. Students learn the use of differentiation and applications , Leibnitz's rule and its applications 3. Students learn concepts of sphere, polar co-ordinates 4. Students know the concepts of order, Degree of differential equations, Solutions of first order , first degree 5. Students learn the various concepts like Jacobian, Extreme values, Vectors etc. 6. Students became aware of solutions of differential equations of homogeneous D.E. , Second order D.E., Total D. E. etc. 7. Students practice the concept of double and triple integration , Beta and gamma

PROGRAM SPECIFIC OUTCOMES

B.Sc.(Computer Science)

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	<p>B.Sc. Part- I (Sem-I) Computer Science Paper I: Introduction to Computers & Modern Operating Environments</p>	<ol style="list-style-type: none"> 1. Student should be able to understand the meaning and basic components of computer system 2. Student will develop a vocabulary of key terms related to the computer and software program menus. 3. Student should be able to gain knowledge about the functions of computer. 4. To provide an in-depth training in use of office automation packages 5. To locate knowledge of software application tools those are essential for a modern office for day to day office management. 6. To gain knowledge of software packages in day to day activities.
2	<p>B.Sc Part- I (Sem-I) Computer Science Paper II: Introduction to Programming in 'C' B.Sc Part- I (Sem-II) Computer Science Paper IV: Programming techniques Using 'C'</p>	<ol style="list-style-type: none"> 1. Students will be able to develop logics which will help them to create programs, applications in C. 2. Also by learning basic programming construct they can easily switch over to any other language in future. 3. Problem solving through computer programming.
3	<p>B.Sc Part- I (Sem-II) Computer Science Paper III: Introduction to Database & HTML B.Sc. Part – II (Sem-IV) Computer Science Paper – VII : Relational Database Management System</p>	<ol style="list-style-type: none"> 1. Enhance the knowledge and understanding of database analysis and design. 2. Enhance the knowledge of the process of database development and administration using SQL and PL/SQL. 3. Use the Relational Model and how it is supported by SQL and PL/SQL. 4. Use the PL/SQL Code Constructs of IF-THEN-ELSE and LOOP types as well as syntax and command functions.
4	<p>B.Sc. Part – II (Sem-III) Computer Science Paper - V : Fundamentals of Software Engineering</p>	<ol style="list-style-type: none"> 1. Students shall have strong foundation in science, mathematics, and engineering, and can apply this fundamental knowledge to software engineering tasks. 2. Students can effectively apply software engineering practice over the entire system lifecycle. This includes requirements engineering, analysis, prototyping, design, implementation, testing, maintenance activities and management of risks involved in software and embedded systems. 3. Students know classical and evolving software engineering methods, can select and tailor appropriate methods for projects, and can apply them as both team members and managers to achieve project goals. 4. Students are knowledgeable of the ethics, professionalism, and cultural diversity in the work environment. 5. Students can apply basic software quality assurance practices to ensure that software designs, development, and maintenance meet or exceed applicable standards. 6. Students have effective written and oral communication skills. Students can prepare and publish the necessary documents required throughout the project lifecycle. Students can effectively contribute to project discussions, presentations, and reviews.

5	<p>B.Sc. Part – II (Sem-III) Computer Science Paper – VI : Object Oriented Programming Using C++</p> <p>B.Sc. Part – II (Sem-IV) Computer Science Paper – VIII : Advanced Object Oriented Programming Using C++</p>	<ol style="list-style-type: none"> 1.To learn advanced features of the C++ programming language as a continuation of the previous course. 2. To learn the characteristics of an object-oriented programming language: data abstraction and information hiding, inheritance, and dynamic binding of the messages to the methods. 3. To learn the basic principles of object-oriented design and software engineering in terms of software-reuse and managing complexity.
6	<p>B.Sc.-III (Sem-V) Computer Science Paper-IX : Computer Networking</p> <p>B.Sc.-III (Sem-VI) Computer Science Paper - XIII : Network Technology And Windows Server 2008</p>	<ol style="list-style-type: none"> 1. Understand Resource sharing is the main objective of the computer network. 2.The goal is to provide all the program, date and hardware is available to everyone on the network without regard to the physical location of the resource and the users. 3. The second objective is to provide the high Reliability of Network. 4. It is achieved by replicating the files on two or more machines, so in case of unavailability (due to fail of hardware) the other copies can be used.
7	<p>B.Sc.-III (Sem-V) Computer Science Paper-X : Visual Programming Using C#</p>	<ol style="list-style-type: none"> 1. Student should be able to demonstrate in designing, coding, compiling, executing, and debugging object oriented, and interactive visual Basic business application. 2. Student should be able to analyze Program generated Output (Forms and Reports) for correctness. 3. Demonstrate Proficiency with event-driven concepts including screen design and selection of appropriate controls (Objects).
8	<p>B.Sc.-III (Sem-V) Computer Science Paper- XI : Linux Operating</p> <p>B.Sc.-III (Sem-VI) Computer Science Paper- XV : Advanced Linux</p>	<ol style="list-style-type: none"> 1.To promote Linux and provide neutral collaboration and education 2.To improve Linux as a technical platform 3.To sponsor the work of Linus Torvalds 4.Understand Command Line Interface. 5.Operating System concepts etc. 6.To become familiar with the UNIX software development environment.
9	<p>B.Sc.-III (Sem-V) Computer Science Paper- XII : Php And Mysql</p>	<ol style="list-style-type: none"> 1. Student will describe and the use the features and syntax of programming language PHP. 2. On completion of the PHP programming and MySQL for web development the student will have a good practical knowledge of how to write successful PHP code utilizing MySQL database.
10	<p>B.Sc.-III (Sem-VI) Computer Science Paper - XIV : Java Programming</p>	<ol style="list-style-type: none"> 1. Create Java programs that solve simple business problems. 2. Validate user input. 3. Construct a Java class based on a UML class diagram. 4. Perform a test plan to validate a Java program. 5. Document a Java program.
11	<p>B.Sc.-III (Sem-VI) Computer Science Paper- XVI: E-Commerce</p>	<ol style="list-style-type: none"> 1. Student should be able to acquire a good knowledge of e-commerce, both technical and business aspects. 2. Student should be able to understand the principles and practices of e-commerce and its related technologies. 3. To Design and implement basic e-commerce application.

PROGRAM SPECIFIC OUTCOMES

BBA

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	HUMAN RESOURCE MANAGEMENT	<ol style="list-style-type: none">1.Explain the importance of HR & their effective mgt in organisation.2.Demonstrate a basic understanding of different tools used in forecasting & planning HR needs.3.Describe the meanings of terminology & tools used in managing employee effectively.4.Record governmental regulations affecting employees & employers.5.Create a cost benefit analysis of training.6.Explain the organizational, social & individual cost & benefits of training & development.7.Describe appropriate implementation monitoring & assessment procedure of training.
2	BUSINESS ECONOMICS	<ol style="list-style-type: none">1. Identify and describe the important institutions and determinants of economic activity at the local, regional, national & international level.2. Identify key relationships between important variables.3. Explain to the non-economist the fundamental economic problem of scarcity.4. Automatically compare and contrast different economic theories.5. Articulate the connections between the different sub- disciplines of economics.6. Communicate economic concepts orally .7. Convey economic ideas in a variety of written forms.
3	MARKETING MANAGEMENT	<ol style="list-style-type: none">1. Communicate effectively in a variety of organizational settings.2. Develop comprehensive strategic & tactical plans for an organization.3. Use creative, critical & reflective thinking to address organizational opportunities & challenges.4. Demonstrate ethical & socially responsible behaviour .5. Develop self leadership strategies to enhance personal & professional effectiveness.6. Evaluate the impact of changing global, political, economic, competitive, environmental, cultural & social systems on marketing strategy development.7. Examine the role of consumers as purchasers & users of goods & services using various theories & models of consumer behaviour.
4	COMPUTER APPLICATION	<ol style="list-style-type: none">1. Demonstrate a basic understanding of computer hardware & software.2. Students utilize web technologies .3. Present conclusions effectively, orally & in writing.4. Apply the skills that are the focus of this program to business scenarios.5. Apply logical skills to programming in a variety of languages.6. Demonstrate problem solving skills.7. Identify an area of interest through the selection of elective courses.8. Understand career paths in the computer support field.
5	PRINCIPLE OF MANAGEMENT	<ol style="list-style-type: none">1.Discuss and communicates the management evolution and how it will affect future managers.2.Observe and evaluate the influence of historical forces on the current practice of management.3.Identify and evaluate social responsibility.4.Practice the process of management's four functions : Planning, organizing, leading and controlling.5.Evaluate leadership styles to anticipate the consequences of each leadership style.

6	FINANCIAL ACCOUNTING	<ol style="list-style-type: none"> 1. Knowledge of accounting cycle. 2. Knowledge of sophisticated financial accounting topics such as business combinations, governmental accounting, partnership accounting, etc. 3. Knowledge of International Accounting Principles and the impact of global issues. 4. Ability to evaluate financial results. 5. Ability to prepare a federal individual tax return. 6. Knowledge of auditing principles and techniques. 7. Knowledge of CPA exam education requirements, parts of the exam and topics included.
7	BUSINESS COMMUNICATION	<ol style="list-style-type: none"> 1. Demonstrate critical and innovative thinking. 2. Display competence in oral, written, and visual communication. 3. Apply communication theories. 4. Show an understanding opportunities in the field of communication. 5. Respond effectively to cultural communication differences. 6. Communicate ethically. 7. Demonstrate positive group communication exchanges.
8	MANAGEMENT IN BUSINESS SERVICES	<ol style="list-style-type: none"> 1. Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management. 2. Describe the legal, social, ethical, and economic environments of business in a global context. 3. Solve organization problems, individually and/or in teams, using quantitative, qualitative, and technology-enhanced approaches. 4. Demonstrate professional communication and behavior. 5. Apply knowledge of business concepts and functions in an integrated manner.
9	MANAGEMENT ACCOUNTING	<ol style="list-style-type: none"> 1. Critically analyse and provide recommendations to improve the operations of organisations through the application of management accounting techniques. 2. Demonstrate mastery of costing systems, cost management systems, budgeting systems and performance measurement systems. 3. Demonstrate the need for a balance between financial and non-financial information in decision making, control and performance evaluation applications of management accounting. 4. Evaluate the costs and benefits of different conventional and contemporary costing systems. 5. Learn independently and to demonstrate high level personal autonomy and accountability. 6. Learn within teams - to co-operate with team members, to assume leadership and to manage differences and conflicts.
10	PRODUCTION MANAGEMENT	<ol style="list-style-type: none"> 1. Exhibit good communication skills in the management of personnel and business relationships; 2. Establish procedures for overseeing a production budget; 3. Coordinate the crewing and casting of a production; 4. Manage a production schedule; and
11	BUSINESS ECONOMICS (MACRO)	<ol style="list-style-type: none"> 1. Identify the role of supply and demand in a market economy. 2. Identify the necessary conditions for market economies to function well. 3. Discuss market system advantages and pricing. 4. Understanding of the economic role of government policy and the Federal Reserve 5. Define and analyze economic problems using algebraic and statistical methods. 6. Identify the benefits and costs of a global economy. 7. Identify the role of supply and demand in a market economy. 8. Identify policy options and their effectiveness. 9. Understanding importance of international relations to trade and finance.

12	ENTREPRENEURSHIP DEVELOPMENT	<ol style="list-style-type: none"> 1. Understand the basic development of entrepreneurship as a profession. 2. Understand business models. 3. Write a business plan describing a new business venture. 4. Understand marketing strategies for small businesses. 5. Identify capital resources for new ventures and small businesses. 6. Monitor the performance of a new firm. 7. Have a basic knowledge of human resource management for small business. 8. Understand the social responsibilities of small business managers.
13	BUSINESS STATISTICS	<ol style="list-style-type: none"> 1. Demonstrate the ability to apply fundamental concepts in exploratory data analysis. 2. Design studies for obtaining data whilst avoiding common design flaws that incur bias, inefficiency and confounding. 3. Demonstrate an understanding of the basic concepts of probability and random variables. 4. Understand the concept of the sampling distribution of a statistic, and in particular describe the behaviour of the sample mean. 5. Understand the foundations for classical inference involving confidence intervals and hypothesis testing. 6. Apply inferential methods relating to the means of Normal distributions. 7. Apply and interpret basic summary and modelling techniques for bivariate data and use inferential methods in the context of simple linear models with Normally distributed errors.
14	FINANCIAL MANAGEMENT	<ol style="list-style-type: none"> 1. Demonstrate understanding of the finance function 2. Demonstrate understanding of the goals of the finance manager 3. Identify the basic financial environment and institutions 4. Perform analytical reviews of financial results, proposals, and plans 5. Identify funding sources, instruments, and markets 6. Demonstrate knowledge of the value of money over time and its uses 7. Demonstrate knowledge of a basic financial vocabulary
15	PRACTICE IN MODERN MANAGEMENT	<ol style="list-style-type: none"> 1. Graduates will demonstrate the ability to communicate effectively both orally and in writing. 2. Graduates will demonstrate knowledge of the legal and ethical environment impacting business organizations and exhibit an understanding and appreciation of the ethical implications of decisions. 3. Graduates will demonstrate an understanding of and appreciation for the importance of the impact of globalization and diversity in modern organizations. 4. Graduates will demonstrate an ability to engage in critical thinking by analyzing situations and constructing and selecting viable solutions to solve problems. 5. Graduates will demonstrate an ability to work effectively with others.
16	RESEARCH METHODOLOGY	<ol style="list-style-type: none"> 1. Students should understand a general definition of research design. 2. Students should know why educational research is undertaken, and the audiences that profit from research studies. 3. Students should be able to identify the overall process of designing a research study from its inception to its report.
17	RECENT TRENDS IN MARKETING	<ol style="list-style-type: none"> 1. Information literacy skills in searching for information related to the theory and practice of management 2. Professional business writing 3. Interviewing skills--interviewing a practicing manager and presenting written and oral reports that integrate information literacy, analysis and synthesis of the manager's activities, critical thinking, and reflections.

18	FOUNDATION OF BUSINESS LAW AND TAX LAW	<ol style="list-style-type: none"> 1. Demonstrate understanding of the basic American Legal System 2. Demonstrate knowledge of basic court procedures 3. Demonstrate understanding of the nature of tort law, including business torts 4. Demonstrate how criminal law relates to business 5. Demonstrate recognition of intellectual property Identify how computer law affects business Analyze the nature and terminology of contract law 6. Demonstrate recognition of the requirements of the contract agreement 7. Demonstrate understanding of contract consideration and capacity 8. Demonstrate recognition of the genuineness of assent in contract formation. 9. Demonstrate understanding of legality and Statute of Frauds in contracts
19	FOUNDATION OF HUMAN SKILL	<ol style="list-style-type: none"> 1. Create a budget, and develop money management, and problem solving skills. 2. Describe employment skills, strengths, and deficits. 3. State educational goals. 4. Depict current contemporary issues regarding culture, ethnicity, health, sexuality, resiliency, coping, identity, self-esteem, and nutrition. 5. Locate and describe one community resource in the surrounding area. 6. Describe and visit one independent living setting.
20	INTERNATIONAL BUSINESS	<ol style="list-style-type: none"> 1. Conduct an environmental scan to evaluate the impact of world issues on an organization's international business opportunities. 2. Conduct, evaluate and present market research to support an organization's international business decision-making. 3. Manage the preparation of documents and the application of procedures to support the movement of products and services in the organization's global supply chain. 4. Evaluate the impact of statutory and regulatory compliance on an organization's integrative trade initiatives. 5. Develop and implement strategies to negotiate effectively within various cultural environments and to address the impact of cultural differences on an organization's integrative trade initiatives. 6. Develop and present an international marketing plan, and evaluate sales strategies that support an organization's integrative trade initiatives. 7. Identify and interpret relevant international financial documents, and evaluate financial strategies that support an organization's integrative trade initiatives. 8. Analyze the impact of an organization's integrative trade initiatives on its human resources management strategies, policies and practices.

PROGRAM SPECIFIC OUTCOMES

BCA

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	Software Packages	<ol style="list-style-type: none">1.To provide an in-depth training in use of office automation packages2. To locate knowledge of software application tools those are essential for a modern office for day to day office management.3. To gain knowledge of software packages in day to day activities.4.Students will create documents that demonstrate proficiency in the use of word processing, spreadsheet,database, and presentation applications.
2	Programming In "C" -II	<ol style="list-style-type: none">1. Students will be able to develop logics which will help them to create programs, applications in C.2. Also by learning basic programming construct they can easily switch over to any other language in future.3.Problem solving through computer programming.
3	Bank Management	<ol style="list-style-type: none">1.A knowledge of the economic roles and structure of banks in different economies;2.Knowledge and understanding of the different types of risks that banks face and how to measure them;3.Knowledge and understanding of company financial statements;4.Knowledge and understanding of statistical and econometric concepts;5.Knowledge and understanding of risk models;6.Knowledge of the economic and financial environments in which banks operate;7.Detailed knowledge and understanding of credit scoring.
4	Financial Accounting with Tally	<ol style="list-style-type: none">1. Knowledge of accounting cycle.2. Knowledge of sophisticated financial accounting topics such as business combinations, governmental accounting, partnership accounting, etc.3. Knowledge of International Accounting Principles and the impact of global issues.4. Ability to evaluate financial results.5. Ability to prepare a federal individual tax return.6. Knowledge of auditing principles and techniques.7. knowledge of CPA exam education requirements, parts of the exam and topics included.
5	Principles of Marketing	<ol style="list-style-type: none">1. Discuss and communicates the management evolution and how it will affect future managers.2. Observe and evaluate the influence of historical forces on the current practice of management.3. Identify and evaluate social responsibility.4. Practice the process of management's four functions : Planning, organizing, leading and controlling.5. Evaluate leadership styles to anticipate the consequences of each leadership style.
6	Fundamentals Of Computer	<ol style="list-style-type: none">1.Student should be able to understand the meaning and basic components of computer system2. Student will develop a vocabulary of key terms related to the computer and software program menus.3. Student should be able to gain knowledge about the functions of computer.
7	Programming In "C" -I	<ol style="list-style-type: none">1. Students will be able to develop logics which will help them to create programs, applications in C.2. Also by learning basic programming construct they can easily switch over to any other language in future.3.Problem solving through computer programming.

8	Principles of Management	<ol style="list-style-type: none"> 1. Discuss and communicates the management evolution and how it will affect future managers. 2. Observe and evaluate the influence of historical forces on the current practice of management. 3. Identify and evaluate social responsibility. 4. Practice the process of management's four functions : Planning, organizing, leading and controlling. 5. Evaluate leadership styles to anticipate the consequences of each leadership style.
9	Financial Accounting	<ol style="list-style-type: none"> 1. Knowledge of accounting cycle. 2. Knowledge of sophisticated financial accounting topics such as business combinations, governmental accounting, partnership accounting, etc. 3. Knowledge of International Accounting Principles and the impact of global issues. 4. Ability to evaluate financial results. 5. Ability to prepare a federal individual tax return. 6. Knowledge of auditing principles and techniques. 7. knowledge of CPA exam education requirements, parts of the exam and topics included.
10	Office management and Communication	<ol style="list-style-type: none"> 1. Demonstrate critical and innovative thinking. 2. Display competence in oral, written, and visual communication. 3. Apply communication theories. 4. Show an understanding opportunities in the field of communication. 5. Respond effectively to cultural communication differences. 6. Communicate ethically. 7. Demonstrate positive group communication exchanges.
11	Cost Accounting	<ol style="list-style-type: none"> 1. Critically analyse and provide recommendations to improve the operations of organisations through the application of management accounting techniques. 2. Demonstrate mastery of costing systems, cost management systems, budgeting systems and performance measurement systems. 3. Demonstrate the need for a balance between financial and non-financial information in decision making, control and performance evaluation applications of management accounting. 4. Evaluate the costs and benefits of different conventional and contemporary costing systems. 5. Learn independently and to demonstrate high level personal autonomy and accountability 6. Learn within teams - to co-operate with team members, to assume leadership and to manage differences and conflicts.
12	Human Resource Management	<ol style="list-style-type: none"> 1. Explain the importance of HR & their effective mgt in organisation. 2. Demonstrate a basic understanding of different tools used in forecasting & planning HR needs. 3. Describe the meanings of terminology & tools used in managing employee effectively. 4. Record governmental regulations affecting employees & employers. 5. Create a cost benefit analysis of training. 6. Explain the organizational, social & individual cost & benefits of training & development. 7. Describe appropriate implementation monitoring & assessment procedure of training. 8. Develop design models of organizational change through case studies providing the necessary skills & methodology.
13	System Analysis & Design	<ol style="list-style-type: none"> 1. Gather data to analyse and specify the requirements of a system. 2. Design system components and environments. 3. Build general and detailed models that assist programmers in implementing a system. 4. Design a database for storing data and a user interface for data input and output, as well as controls to protect the system and its data.

14	Object Oriented Programming with C++	<ol style="list-style-type: none"> 1. Understand the features of C++ supporting object oriented programming 2. Understand the relative merits of C++ as an object oriented programming language. 3. Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism. 4. Understand advanced features of C++ specifically stream I/O, templates and operator overloading.
15	Computer Oriented Statistical Methods	<ol style="list-style-type: none"> 1. Demonstrate the ability to apply fundamental concepts in exploratory data analysis. 2. Design studies for obtaining data whilst avoiding common design flaws that incur bias, inefficiency and confounding. 3. Demonstrate an understanding of the basic concepts of probability and random variables. 4. Understand the concept of the sampling distribution of a statistic, and in particular describe the behaviour of the sample mean. 5. Understand the foundations for classical inference involving confidence intervals and hypothesis testing. 6. Apply inferential methods relating to the means of Normal distributions. 7. Apply and interpret basic summary and modelling techniques for bivariate data and use inferential methods in the context of simple linear models with Normally distributed errors.
16	Env	<ol style="list-style-type: none"> 1. Master core concepts and methods from ecological and physical sciences and their application in environmental problem solving. 2. Master core concepts and methods from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions. 3. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems. 4. Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales. 5. Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes. 6. Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world. 7. Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to conduct high-level work as interdisciplinary scholars and/or practitioners.
17	Entrepreneurship Development	<ol style="list-style-type: none"> 1. Understand the basic development of entrepreneurship as a profession. 2. Understand business models. 3. Write a business plan describing a new business venture. 4. Understand marketing strategies for small businesses. 5. Identify capital resources for new ventures and small businesses. 6. Monitor the performance of a new firm. 7. Have a basic knowledge of human resource management for small business. 8. Understand the social responsibilities of small business managers.

18	Organizational Behaviour	<ol style="list-style-type: none"> 1.To discuss the development of the field of organizational behaviour and explain the micro and macro approaches 2.To analyze and compare different models used to explain individual behaviour related to motivation and rewards 3.To identify the processes used in developing communication and resolving conflicts 4.To explain group dynamics and demonstrate skills required for working in groups (team building) 5.To identify the various leadership styles and the role of leaders in a decision making process. 6.To explain organizational culture and describe its dimensions and to examine various organizational designs 7.To discuss the implementation of organizational change.
19	DBMS using MS-Access	<ol style="list-style-type: none"> 1.To understand the application of DBMS , difference between file system vs dbms. 2.Identify the data model, understand dbms Structure, Identify Entity , ERD, Understand Relation algebra concept, selection. 3.Study Of projection,relational calculus which helps in understanding queries,Able to learn DDL,DML cmd.
20	Web Technology	<ol style="list-style-type: none"> 1.Select and apply markup languages for processing, identifying, and presenting of information in web pages. 2.Use scripting languages and web services to transfer data and add interactive components to web pages. 3.Create and manipulate web media objects using editing software. 4.Incorporate aesthetics and formal concepts of layout and organization to design websites that effectively communicate using visual elements. 5.Conceptualize and plan an internet-based business that applies appropriate business models and web technologies. 6.Combine multiple web technologies to create advanced web components. 7Design websites using appropriate security principles, focusing specifically on the vulnerabilities inherent in common web implementations.
21	Computer Mathematics	<ol style="list-style-type: none"> 1. Demonstrate the ability to apply fundamental concepts in exploratory data analysis. 2. Design studies for obtaining data whilst avoiding common design flaws that incur bias, inefficiency and confounding. 3. Demonstrate an understanding of the basic concepts of probability and random variables. 4. Understand the concept of the sampling distribution of a statistic, and in particular describe the behaviour of the sample mean. 5. Understand the foundations for classical inference involving confidence intervals and hypothesis testing.
22	Mini Project Work	<ol style="list-style-type: none"> 1.Understand and design Web Pages. 2.Understand and design web services and database. 3.Design, implement, analyze, and test online mini project.
23	Management Accounting	<ol style="list-style-type: none"> 1. Critically analyse and provide recommendations to improve the operations of organisations through the application of management accounting techniques. 2. Demonstrate mastery of costing systems, cost management systems, budgeting systems and performance measurement systems. 3. Demonstrate the need for a balance between financial and non-financial information in decision making, control and performance evaluation applications of management accounting. 4. Evaluate the costs and benefits of different conventional and contemporary costing systems.

24	E-Commerce	<ol style="list-style-type: none"> 1. Analyze the impact of E-commerce on business models and strategy 2. Describe Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational. 3. Describe the infrastructure for E-commerce 4. Describe the key features of Internet, Intranets and Extranets and explain how they relate to each other. 5. Discuss legal issues and privacy in E-Commerce 6. Assess electronic payment systems 7. Recognize and discuss global E-commerce issues
25	Computer Network	<ol style="list-style-type: none"> 1.To understand the organization of computer networks, factors influencing computer network development and the reasons for having variety of different types of networks. 2.To design a network routing for IP networks. 3.To identify main internal PC components and connections. 4.To explain how a collision occurs and how to solve it. 5.To demonstrate proper placement of different layers of ISO model and illuminate its function. 6.To learn Internet structure and can see how standard problems are solved in that context. 7.To determine proper usage of the IP address, subnet mask and default gateway in a routed network. 8.To understand internals of main protocols such as HTTP, FTP, SMTP, TCP, UDP, IP 9.To analyze simple protocols and can independently study literature concerning computer networks.
26	RDBMS with Oracle	<ol style="list-style-type: none"> 1.Understand, appreciate and effectively explain the underlying concepts of database technologie 2.Design and implement a database schema for a given problem-domain 3.Normalize a database 4.Populate and query a database using SQL DML/DDDL commands. 5.Declare and enforce integrity constraints on a database using a state-of-the-artRDBMS 6.Programming PL/SQL including stored procedures, stored functions, cursors,packages. 7.Design and build a GUI application using a 4GL
27	Visual Programming	<ol style="list-style-type: none"> 1.Design, document, code and test small C# console and GUI applications. 2.Design, document, code and unit test class libraries as part of a larger project. 3.Use an object browser and .NET documentation to examine C# and the .NET framework namespace contents. 4.Use the Visual Studio IDE to create and debug application and class library solutions and projects. 5.Interpret UML class diagrams to create C# classes and applications
28	Mini Project	<ol style="list-style-type: none"> 1.Understand and design Web Pages. 2.Understand and design web services and database. 3.Design, implement, analyze, and test online mini project.
29	Linux	<ol style="list-style-type: none"> 1.Basic Networking Concepts 2.Installation and basic handling of Linux System 3.Basic Configuration of various server like Web Server, DNS Server, Mail Server and Cache Server 4.Configuring and troubleshooting Host and Network Security in Linux System 5.Installing, configuring Bandwidth Management tool
30	Data Warehousing & Data mining	<ol style="list-style-type: none"> 1. Identify the scope and necessity of Data Mining & Warehousing for the society. 2.Describe the designing of Data Warehousing so that it can be able to solve the root problems. 3. To understand various tools of Data Mining and their techniques to solve the real time problems. 4. To develop ability to design various algorithms based on data mining tools. 5. To develop further interest in research and design of new Data Mining techniques.

31	Java Programming	<ol style="list-style-type: none"> 1. Create Java programs that solve simple business problems. 2. Validate user input. 3. Construct a Java class based on a UML class diagram. 4. Perform a test plan to validate a Java program. 5. Document a Java program.
32	Strategic Management	<ol style="list-style-type: none"> 1. know, understand, and apply the strategic management process to analyze and improve organizational performance. 2. The complementary learning outcomes are to be able to conduct and draw conclusions from external analyzes of an organization's environment. 3. To able to conduct and draw conclusions from internal analyzes of an organization's capabilities, formulate realistic strategies. 4. Develop implementation plans to execute those strategies.
33	Project Work	<ol style="list-style-type: none"> 1. An ability to critically analyze a problem and to design, implement, and evaluate a computing solution that meets requirements. 2. An ability to work effectively in small groups on medium scale computing projects. 3. An ability to use oral and written communication effectively. 4. A recognition of the need to engage in life long learning. 5. An ability to understand the social and ethical implications of working as a professional in the field of computer science. 6. An ability to use current tools and methodologies in computing practice.

PROGRAM SPECIFIC OUTCOMES

BCS

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	Discrete Mathematics -I	1. Simplify & evaluate basic logic statement including compound , implicatiron , inerse & converse statement 2. Understand the notation of mathematical thinging & proof. 3. Write an argument using logical notation & detaremine valid or not valid argument 3. To apprecitae the basic principles of boolean algebra.
2	Electronics Devices and Circuits - I	1. Apply the concept of basic electronic device Student should know basci electronic devices
3	Introdcution to computer and data Processing - I	1. Students will learn to use and configure essential office applications including word processing, spreadsheets. 2. Students will learn essential operating systems skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system. 3. Students will develop a basic understanding of technologies and protocols used on the Internet, and how to effectively use Internet tools technologies including current web-based applications, e-mail, and social networking tools; developing searching strategies; and basic web authoring
4	Algebra	1. Students will develop and apply concepts of expressions, equations and inequalities to investigate and describe relationships and solve problems. 2. Understand the use of parameters and variables, including appropriate replacement sets. [Identify which symbols represent parameters and which represent variables. Represent situations with polynomials or equations. 3. Show procedural fluency with polynomial expressions, including basic factoring. [Perform flexibly operations of adding, subtracting, and multiplying on polynomials. Perform limited division. Understand and perform limited factoring, such as common factors and difference of squares.] 4. Use equations, inequalities, and systems of equations & inequalities to represent situations, and find solutions via symbolic, numeric and graphic methods. [Solve linear equations and inequalities flexibly by multiple methods. Use systems of equations in two or three variables, and solve by multiple methods.]
5	Digital Electronics-II	1. The basic concept of logical gates & digital circuit 2. Student should maintain electronic & digital & analog device & circuit 3. Knowledge of fundamental digital design & systematic method of analysis & design degital electornics
6	Introduction to Programming Using "C" - I	1. Identify the parts of the computer system. 2. Adequately explain functioning of computer components. 3. Explain the process of problem solving using computer 4. Design an algorithmic solution for a given problem 5. Write a maintainable C program for a given algorithm. 6. Trace the given C program manually. 7. Write C program for simple applications of real life using structures and files. 8. Explain role of Operating system in computer system and applications of computer networks.
7	Descriptive Statistics - I	1. Recognize and apply the most appropriate probability techniques in particular circumstances. 2. Understand, interpret, and communicate statistical reasoning from data using basic statistical terms, descriptive statistics, charts and graphs when appropriate. 3. Recognize and evaluate the relationship between two quantitative variables through simple linear regression and correlation and be able to explain why correlation does not imply causation. 4. Understand, analyze and interpret relationships in two-way tables using chi-square tests.
8	Probability and Discrete Probability Distributions	1. Students should develop an appreciation of the need for data to make good decisions and an understanding of the dangers inherent in basing decisions on anecdotal evidence rather than on data. 2. Construct and interpret graphical displays of distributions of univariate data.

9	Introduction to Computer and Data Processing- II	<ol style="list-style-type: none"> 1. Identify the parts of the computer system. 2. Adequately explain functioning of computer components. 3. Explain the process of problem solving using computer 4. Design an algorithmic solution for a given problem 5. Write a maintainable C program for a given algorithm. 6. Trace the given C program manually. 7. Write C program for simple applications of real life using structures and files. 8. Explain role of Operating system in computer system and applications of computer networks.
10	Introduction to Programming Using C - II	<ol style="list-style-type: none"> 1. Identify the parts of the computer system. 2. Adequately explain functioning of computer components. 3. Explain the process of problem solving using computer 4. Design an algorithmic solution for a given problem 5. Write a maintainable C program for a given algorithm. 6. Trace the given C program manually. 7. Write C program for simple applications of real life using structures and files. 8. Explain role of Operating system in computer system and applications of computer networks.
11	Graph Theory	<ol style="list-style-type: none"> 1. Br familiar with the defination & basic theory of grap 2. To study different type of graph 3. To draw different types of graph 4. To use graph find the matices & equation
12	Calculus	<ol style="list-style-type: none"> 1. Interpret a function form an algebraic functoin 2. To provide basic knowledge of differinal calculas
13	Electronics Devices and Circuits-II	<ol style="list-style-type: none"> 1. Maintain digital and analog devices and circuits. 2. Analyze components associated with digital and analog electronic systems. 3. Demonstrate proficiency in the use of electronic equipment and devices. 4. Assist in the design, operation, and troubleshooting of electronic systems.
14	Digital Electronics -II	<p>The student will be able to:</p> <ol style="list-style-type: none"> 1. Tell the history and development of digital electronics. 2. Describe and demonstrate the use digital test equipment and its operating characteristics. 3. Examine purpose of 555 timer and digital integrated circuits. 4. Identify and describe the six basic logic gates and combinational circuits in digital electronics. 5. Recognize the number systems use in digital logic design and its conversion 6. Identify and describe flip-flop circuits.
15	Descriptive Statistics-II	<p>Recognize and apply the most appropriate probability techniques in particular circumstances. Understand, interpret, and communicate statistical</p> <ol style="list-style-type: none"> 1. reasoning from data using basic statistical terms, descriptive statistics, charts and graphs when appropriate. 2. Recognize and evaluate the relationship between two quantitative variables through simple linear regression and correlation and be able to explain why correlation does not imply causation. 3. Understand, analyze and interpret relationships in two-way tables using chi-square tests.
16	Continuous Probability Distributions and Testing of Hypothesis	<ol style="list-style-type: none"> 1. Students should develop an appreciation of the need for data to make good decisions and an understanding of the dangers inherent in basing decisions on anecdotal evidence rather than on data. 2. Construct and interpret graphical displays of distributions of univariate data.
17	Numerical Methods	<ol style="list-style-type: none"> 1. Analysis & evaluate the accuracy of common numerical values 2. Establishing the limitations ,advantages & disadvantages of the numerical method 3. To find approximate accurate value of given problem.
18	Computer Organization	<ol style="list-style-type: none"> 1. To understant input / output mechanism 2. Understand the various part of a system 3. To interface digital circuit to microprocessor
19	Object Oriented Programming (C++)	<ol style="list-style-type: none"> 1. Understand the features of C++ supporting object oriented programming 2. Understand the relative merits of C++ as an object oriented programming language 3. Understand how to produce object-oriented software using C++ 4. Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism 5. Understand advanced features of C++ specifically stream I/O, templates and operator overloading
20	Linear Algebra	<ol style="list-style-type: none"> 1. Solve system of linear equation using multiple methods 2. Carry out matric operation including inverse & determineant 3. Define the basic terms & concept of matrices & vectors

21	Computer Instrumentation I	<ol style="list-style-type: none"> 1. Apply concept of Automatic control, including measurement 2. Design & implement system utilizing analog or digital control device 3. Visualization in process control system.
22	SAD and Introduction to SE	<ol style="list-style-type: none"> 1. gather data to analyse and specify the requirements of a system. 2. design system components and environments. 3. build general and detailed models that assist programmers in implementing a system. 4. design a database for storing data and a user interface for data input and output, as well as controls to protect the system and its data.
23	English for Communication	<ol style="list-style-type: none"> 1. Demonstrate preparation and research skills for oral presentations 2. Develop proper listening skills 3. Articulate and enunciate words and sentences clearly and efficiently 4. Show confidence and clarity in public speaking projects 5. Demonstrate ability to gather information and apply it to persuade or articulate one's own point of view
24	Env	To understand what is mean by actual environment .To develop project with respect to environment study
25	Data Structure through C++	<ol style="list-style-type: none"> 1. Student will be able to choose appropriate data structure as applied to specified problem definition. 2. Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures. 3. Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc. 4. Students will be able to use linear and non-linear data structures like stacks, queues , linked list etc.
26	RDBMS with Oracle	<ol style="list-style-type: none"> 1. Normalize a database 2. Populate and query a database using SQL DML/DDI commands. 3. Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS 4. Programming PL/SQL including stored procedures, stored functions, cursors, packages 5. Design and build a GUI application using a 4GL 6. Understand, appreciate and effectively explain the underlying concepts of database technologies
27	Computational Geometry	<ol style="list-style-type: none"> 1. To develop own algorithm for solving geometry problem 2. Use line point duality to develop efficient algorithm 3. Apply geometry technique to real world problem
28	Operation Research	<ol style="list-style-type: none"> 1. Develop a report that describe the model 2. Mathematical optimization technique 3. Write computer program to implement algorithm & solve problem
29	Microcontroller	<ol style="list-style-type: none"> 1. The general construction of microcomputer system 2. To design , build & test digital electronic circuit & microcontroller system. 3. Develop software for microcontroller system using high level programming language.
30	Computer Instrumentation II	<ol style="list-style-type: none"> 1. Able to develop , understanding of construction & working of different measuring instrument. 2. To design a variety of electronic & computer based device 3. Write simple computer programme for digital data acquisition & process control.
31	ENGLISH FOR COMMUNICATION	<ol style="list-style-type: none"> 1. Understand the rules of spelling and grammar 2. Read and analyze text and be able to summarize ideas in writing 3. Organize thoughts in a manner that emphasizes flow and paragraph development 4. Learn proper footnoting and bibliography skills 5. Understand different writing techniques and styles based on the communication medium being used
32	ENVIRONMENTAL SCIENCE	To understand what is mean by actual environment .To develop project with respect to environment study
33	OPERATING SYSTEM	<ol style="list-style-type: none"> 1. Describe functions, structures and history of operating systems . 2 understanding of design issues associated with operating systems 3. Describe concepts of memory management including virtual memory 4. Describe issues related to file system interface and implementation, disk management 5. Be familiar with protection and security mechanisms 6. Be familiar with various types of operating systems including Unix

34	INTRODUCTION TO VB.NET	<ol style="list-style-type: none"> 1. understand the programming algorithm, process, and structure 2. understand and identify the fundamental concepts of object-oriented programming 3. understand and use the concepts of objects, primitive value, message, method, selection control structure, repetition control structures, object reference, container, and method parameter 4. know how to write and run a complete program 5. understand and identify the importance of object-oriented programming for the Internetbased electronic commerce 6. understand the impact of Java and VB.NET on business
35	DATA COMMUNICATION	<ol style="list-style-type: none"> 1. Independently understand basic computer network technology. 2. Understand and explain Data Communications System and its components. 3. Identify the different types of network topologies and protocols. 4. Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer. 5. Identify the different types of network devices and their functions within a network 6. Understand and building the skills of subnetting and routing mechanisms. 7. Familiarity with the basic protocols of computer networks, and how they can be used to assist in network design and implementation.
36	SOFTWARE ENGINEERING	<ol style="list-style-type: none"> 1. an ability to apply knowledge of mathematics, science, and engineering. 2. an ability to design and conduct experiments, as well as to analyze and interpret data. 3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability. 4. an ability to function on multi-disciplinary teams. 5. an ability to identify, formulate, and solve engineering problems. 6. an understanding of professional and ethical responsibility
37	INTRODUCTION TO JAVA PROGRAMMING	<ol style="list-style-type: none"> 1. Read and understand Java-based software code of medium-to-high complexity. 2. Use standard and third party Java's API's when writing applications. 3. Understand the basic principles of creating Java applications with graphical user interface (GUI). 4. Create rich user-interface applications using modern API's such as JAVAFX. 5. Understand the fundamental concepts of computer science: structure of the computational process, algorithms and complexity of computation. 6. Understand the basic approaches to the design of software applications. 7. Apply the above to design, implement, appropriately document and test a Java application of medium complexity, consisting of multiple classes.
38	E-COMMERCE	<ol style="list-style-type: none"> 1. Design and implement an e-commerce application with a shopping cart. 2. Integrate the waterfall model in the development of e-commerce applications. 3. Integrate user-centered design guidelines in developing user-friendly websites. 4. Evaluate the bullwhip effect in a supply chain, analyze the causes, and recommend possible solutions. 5. Analyze different types of portal technologies and deployment methodologies commonly used in the industry. 6. Analyze the effectiveness of network computing and cloud computing policies in a multi-location organization.
39	LINUX OPERATING SYSTEM	<ol style="list-style-type: none"> 1. Demonstrate understanding of the concepts, structure and design of operating Systems 2. Demonstrate understanding of operating system design and its impact on application system design and performance 3. Demonstrate competence in recognizing and using operating system features.
40	OOP WITH VB.NET	<ol style="list-style-type: none"> 1. understand the programming algorithm, process, and structure 2. understand and identify the fundamental concepts of object-oriented programming 3. understand and use the concepts of objects, primitive value, message, method, selection control structure, repetition control structures, object reference, container, and method parameter 4. know how to write and run a complete program 5. understand and identify the importance of object-oriented programming for the Internetbased electronic commerce 6. understand the impact of Java and VB.NET on business

41	COMPUTER NETWORKS	<ol style="list-style-type: none"> 1.To understand the organization of computer networks, factors influencing computer network development and the reasons for having variety of different types of networks. 2.To design a network routing for IP networks. 3.To identify main internal PC components and connections. 4.To explain how a collision occurs and how to solve it. 5.To demonstrate proper placement of different layers of ISO model and illuminate its function. 6.To learn Internet structure and can see how standard problems are solved in that context. 7.To determine proper usage of the IP address, subnet mask and default gateway in a routed network. 8.To understand internals of main protocols such as HTTP, FTP, SMTP, TCP, UDP, IP 9.To analyze simple protocols and can independently study literature concerning computer networks.
42	UNIFIED MODELING LANGUAGE	<ol style="list-style-type: none"> 1. Master the fundamental principles of OO programming, 2. Master key principles in OO analysis, design, and development , 3. Be familiar with the application of the Unified Modeling Language (UML) towards analysis and design, 4. Master common patterns in OO design and implement them, 5. Be familiar with alternative development processes, 6. Be familiar with group/team projects and presentations. 7. Be exposed to technical writing and oral presentations.
43	ADVANCED JAVA	<ol style="list-style-type: none"> 1. Create Java programs that solve simple business problems. 2.Validate user input. 3.Construct a Java class based on a UML class diagram. 4.Perform a test plan to validate a Java program. 5.Document a Java program.
44	WEB TECHNOLOGY	<ol style="list-style-type: none"> 1.Students are able to develop a dynamic webpage by the use of java script and DHTML. 2.Students will be able to write a well formed / valid XML document. 3.Students will be able to connect a java program to a DBMS and perform insert, update and delete operations on DBMS table. 4.Students will be able to write a server side java application called Servlet to catch form data sent from client, process it and store it on database. 5.Students will be able to write a server side java application called JSP to catch form data sent from client and store it on database.
45	PROJECT	To understand the actual technology using all languages .

PROGRAM SPECIFIC OUTCOMES
M.Sc.(Computer Science)

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	Theory of Languages	<ol style="list-style-type: none"> 1. Student Should be able to analyse and design finite automata, pushdown automata, Turing machines, formal languages, and grammars. 2. demonstrate their the understanding of key notions, such as algorithm, computability, decidability, and complexity through problem solving. 3. Toprove the basic results of the Theory of Computation. 4. To state and explain the relevance of the Church-Turing thesis.
2	Advanced Computer Networks	<ol style="list-style-type: none"> 1. Students Independently understand basic computer network technology. 2. Students Understand and explain Data Communications System and its components. 3. Student Should be able to Identify the different types of network topologies and protocols. 4. Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer. 5. Student Should be able to Identify the different types of network devices and their functions within a network 6. Student Should be able to Understand and building the skills of subnetting and routing mechanisms.
3	Advanced Data Base Theory	<ol style="list-style-type: none"> 1. explain and evaluate the fundamental theories and requirements that influence the design of modern database systems. 2. To assess and apply database functions and packages suitable for enterprise database development and database management. 3. critically evaluate alternative designs and architectures for databases and data warehouses. 4. discuss and evaluate methods of storing, managing and interrogating complex data. 5. explain and critically evaluate database solutions for data exchange. 6. analyse the background processes involved in queries and transactions, and explain how these impact on database operation and design.
4	Design and Analysis of Algorithms	<ol style="list-style-type: none"> 1. Student Should be able to Understanding basic ideas about algorithms. 2. Student Should be able to Understanding the concepts of time and space complexity, worst case, average case and best case complexities and the big-O notation. 3. Student Should be able to Understanding the range of behaviors of algorithms and the notion of tractable and intractable problems. 4. Knowing and understanding a wide range of searching and sorting algorithms.
5	CBCS (Comp.Sci / Other Dept.) Web Technology	<ol style="list-style-type: none"> 1. To apply a structured approach to identifying needs, interests, and functionality of a website. 2. To design dynamic websites that meet specified needs and interests. 3. Student Should be able to write well-structured, easily maintained, standards-compliant CSS code to present HTML pages in different ways. 4. use JavaScript to add dynamic content to pages. 5. write JavaScript code that works in all major browsers (including IE, Mozilla-based browsers such as Firefox, Opera, Konqueror, Safari, Chrome). 6. To use JavaScript to access and use web services for dynamic content (AJAX, JSON, etc.)

6	Compiler Techniques	<ol style="list-style-type: none"> 1. student will be able to Describe the design of a compiler including its phases and components. 2. student will be able to Describe current developments in compiler design and implementation. 3. student will be able to identify the similarities and differences among various parsing techniques and grammar transformation techniques. 4. student will be able to Describe the role of the compiler in ensuring the security, privacy and integrity of data.
7	Artificial Intelligence	<ol style="list-style-type: none"> 1. To Define the meaning of "artificial intelligence". 2. Name examples of AI that are successful in real-world problems. 3. Describe the strengths and limitations of various state-space search algorithms, and choose the appropriate algorithm for a problem. 4. To Formulate and solve problems in the framework of constraint satisfaction problems. 5. To Formulate and solve planning problems.
8	Java Programming	<ol style="list-style-type: none"> 1. Student Should be able to Read and understand Java-based software code of medium to-high complexity. 2. To Use standard and third party Java's API's when writing applications. 3. Student Should be able to Understand the basic principles of creating Java applications with graphical user interface (GUI). 4. To Create rich user-interface applications using modern API's such as JAVAFX. 5. To Understand the basic approaches to the design of software applications. 6. To Apply the above to design, implement, appropriately document and test a Java application of medium complexity, consisting of multiple classes.
9	Computer Architecture	<ol style="list-style-type: none"> 1. Ability to identify the basic components and design of a computer, including CPU, memories, and input/output units 2. Ability to identify the issues involved in the instruction execution and various stages of instruction life stage 3. Ability to identify the issues related to performance improvement 4. Ability to distinguish performance tradeoff between different memory units and instruction sets
10	Software Engineering	<ol style="list-style-type: none"> 1. Acquire strong fundamental knowledge in science, mathematics, fundamentals of computer science, software engineering and multidisciplinary engineering to begin in practice as a software engineer. 2. Design applicable solutions in one or more application domains using software engineering approaches that integrate ethical, social, legal and economic concerns. 3. Deliver quality software products by possessing the leadership skills as an individual or contributing to the team development and demonstrating effective and modern working strategies by applying both communication and negotiation management skill. 4. Apply new software models, techniques and technologies to bring out innovative and novelistic solutions for the growth of the society in all aspects and evolving into their continuous professional development.

PROGRAM SPECIFIC OUTCOMES

PGDCA

SR. NO	COURSE NAME	PROGRAM SPECIFIC OUTCOMES
1	PGDCA Semester I & Paper-1.1 Fundamentals of Computer	<ol style="list-style-type: none"> 1. Student should be able to understand the meaning and basic components of computer system 2. Student will develop a vocabulary of key terms related to the computer and software program menus. 3. Student should be able to gain knowledge about the functions of computer.
2	PGDCA Semester II Paper-2.1 Office Automation tools	<ol style="list-style-type: none"> 1. To provide an in-depth training in use of office automation packages 2. To locate knowledge of software application tools those are essential for a modern office for day to day office management. 3. To gain knowledge of software packages in day to day activities.
3	PGDCA Semester I Paper-1.2 E-Commerce and HTML	<ol style="list-style-type: none"> 1. Student should be able to acquire a good knowledge of e-commerce, both technical and business aspects. 2. Student should be able to understand the principles and practices of e-commerce and its related technologies. 3. To Design and implement basic e-commerce application.
4	PGDCA Semester II Paper-2.2 Web designing with PHP and MySQL	<ol style="list-style-type: none"> 1. Student will describe and the use the features and syntax of programming language PHP. 2. On completion of the PHP programming and MySQL for web development the student will have a good practical knowledge of how to write successful PHP code utilizing MySQL database.
5	PGDCA Semester I & II Paper-1.3 Visual Programming Part-I Paper 2.3 Visual Programming Part-II	<ol style="list-style-type: none"> 1. Student should be able to demonstrate in designing, coding, compiling, executing, and debugging object oriented, and interactive visual Basic business application. 2. Student should be able to analyze Program generated Output (Forms and Reports) for correctness. 3. Demonstrate Proficiency with event-driven concepts including screen design and selection of appropriate controls (Objects).
6	PGDCA Semester I & II Paper-1.4 Programming using C. Paper 2.4 Advanced Programming using C	<ol style="list-style-type: none"> 1. Students will be able to develop logics which will help them to create programs, applications in C. 2. Also by learning basic programming construct they can easily switch over to any other language in future. 3. Problem solving through computer programming.
7	PGDCA Semester I & II Paper-1.5 RDBMS with Oracle Part-I Paper 2.5 RDBMS with Oracle Part-II	<ol style="list-style-type: none"> 1. Enhance the knowledge and understanding of database analysis and design. 2. Enhance the knowledge of the process of database development and administration using SQL and PL/SQL. 3. Use the Relational Model and how it is supported by SQL and PL/SQL. 4. Use the PL/SQL Code Constructs of IF-THEN-ELSE and LOOP types as well as syntax and command functions.

COURSE OUTCOMES

SR. NO.	CAREER ORIENTED COURSE NAME	COURSE OUTCOMES After completion the course , the students will be able:
1	YOGA AND MEDITATION	<ol style="list-style-type: none"> 1.To acquire basic scientific knowledge of yoga 2.To start career as yoga teacher or instructor 3.To understand the tradition of yoga studies in India 4.To use yoga for their personal,physical or mental health. 5.Topropogate yoga for community health. 6.To understand the importance of Indian yoga culture
2	SERICULTURE	<ol style="list-style-type: none"> 1.To learn the skill of maintainance of silkworm for the quality production of silk 2.To acquaint the method of cultivation of mulberry plant 3.To be self employed
3	PLANT PROTECTION	<ol style="list-style-type: none"> 1.To acquaint the scientific skill of plant protecting. 2.To comprehend different types of crop plants. 3.Tounderstand the cultivation procedure of crop plants like sugarcane,grapes,brinjal etc. 4.To understand natural resources and environment
4	CERTIFICATE COURSE IN HARDWARE AND MAINTAINANCE	<ol style="list-style-type: none"> 1.To acquainted the hardware component of computer system. 2.To be self employed 3.To learn the skill of computer maintainance 4.To be hardware and software instructor
5	CERTIFICATE COURSE IN TAX PROCEDURE	<ol style="list-style-type: none"> 1.Student will be able to demonstrate progressive learning of various tax issue ,variopus tax forms relating to individual student will able to demonstrate knowlegde in setting up computerzied set of accountancy books. 2.Learners can also acquire practical skill to work as tax consultant , audit assistant & other finacial supportive services. 3.Computation of total taxable income of individual business, profession,etc. 4.Determination of tax liability.
6	CERTIFICATE COURSE IN ELECTRIC MAINTAINANCE OF DOMESTIC APPLIANCES	<ol style="list-style-type: none"> 1.To create awareness and safety regarding domestic electric appliances. 2.To acquire the skill of repairing home electric appliances. 3.To learn to utilise tools required to repair home electric appliances.
7	CERTIFICATE COURSE IN FUNCTIONAL ENGLISH	<ol style="list-style-type: none"> 1.After completion of the course, the students will be able: 2.To demonstrate the use of connective language to organize speech 3.To give personal information with a degree of confidence 4.To study the accepted pronunciation of English sounds by using speech organs correctly. 5.To identify their flaws in English pronunciation and speak effectively by rectifying them. 6.To use English in various life situations. 7.To use communicative grammar in English. 8.To face interviews effectively and grab job opportunities. 9.To demonstrate the use of connective language to organize speech

