DEPARTMENT OF COMPUTER SCIENCE
Program Outcomes

PO1. Scientific knowledge: Apply the knowledge of mathematics, science, and computing to the solution of complex scientific problems.

PO2. Problem analysis: Identify, formulate, research literature, and analyze complex scientific problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and applied sciences.

PO3. Design/development of solutions: Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tools usage: Create, select, and apply appropriate techniques, resources, and modern computing and IT tools including prediction and modeling to complex scientific activities with an understanding of the limitations.

PO6. The software engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional practice.

PO7. Environment and sustainability: Understand the impact of the professional software engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the scientific practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex activities with the scientific community and with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

UNDERGRADUATE PROGRAM OUTCOMES

PO1:Critical Thinking: Ability to take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO2:Effective Communication: Ability to speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO3:Effective Citizenship: Ability to demonstrate empathetic social concern and equity-centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO4:Environment and Sustainability: Ability to understand the issues of environmental contexts and sustainable development.

PO5:Ethical Living: Ability to recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6:Social Interaction: Ability to elicit views of others, mediate disagreements and help reach conclusions in group settings.
.
PO7:Problem Solving and Analytical Skills: Ability to think rationally, analyze situations and solve problems adequately.

POST GRADUATE PROGRAM OUTCOMES

PO1: Attained profound **Expertise in Discipline.**

PO2: Acquired **Ability to function in multidisciplinary Domains.**

PO3: Attained ability to exercise **Research Intelligence** in investigations and Innovations.

PO4: Learnt Ethical Principles and be committed to **Professional Ethics**

PO5: Incorporated **Self-directed and Life-long Learning**

PO6: Obtained Ability to maneuver in diverse contexts with **Global Perspective**

PO7: Attained **Maturity to respond to one's calling**

BCA
(Bachelor of Computer Applications)
Program outcomes

PO-1: Understand, analyze and develop computer programs in the areas related to algorithm, web design and networking for efficient design of computer based system.

PO-2: Work in the IT sector as system engineer, software tester, junior programmer, web developer, system administrator, software developer etc.

PO-3: Apply standard software engineering practices and strategies in software project development using open source programming environment to deliver a quality of product for business success.

PO-4: Effectively communicate busineness issues, management concepts, plans and decisions both in oral and written form using appropriate supportive technologies.

PO-5: Develop various real time applications using latest technologies and programming languages. Possess strong foundation for their higher studies.

PO-6: Blend analytical, logical and managerial skills with the technical aspects to resolve real world issues.

PO-7: Become employable in various IT companies and government jobs.

BCA
Program Specific outcomes

PSO1: focuses on preparing student for roles pertaining to computer applications and IT industry .

PSO2: start from the basics and in every semester learns each and everything about computers.

PSO3: develop programming skills, networking skills, learn applications, packages, programming languages and modern techniques of IT.

PSO4: get skill and info not only about computer and information technology but also in common, organization and management .

PSO5: Learn programming language such as Java, c++, HTML, SQL, etc.

PSO6: Information about various computer applications and latest development in IT and communication system is also provided

BCA-I

Course Outcomes

Programming in c	**CO-1:** Analyze a given problem and develop an algorithm to solve the problem **CO-2:** Improve upon a solution to a problem **CO-3:** Use the 'C' language constructs in the right way. **CO-4:** Design, develop and test programs written in 'C'. **CO-5:** Use different data types in a computer program. **CO-6:** Design programs involving decision structures, loops and functions.
PC Software & Multimedia	**CO-1:** Remember the basic terminologies used for the Computers as well as familiarize with various Number Systems. **CO-2:** Discuss the Evolution of various types of the Operating system. **CO-3:** Apply different operations of the Windows Operating Environment. **CO-4:** Illustrate the use of Spreadsheets and Database Packages. **CO-5:** Compare and Co-relate different algorithms and flowcharts. **CO-6:** Create a basic foundation of representing the solution of simple problems using Algorithm and Flowcharts.
Web Technology And E Commerce	**CO-1:** Understanding the use of HTML tags. **CO-2:** Learning and using Cascading Style Sheet. **CO-3:** Understanding the concept of JavaScript. **CO-4:** Designing and Developing web pages using PHP, HTML. **CO-5:** Understand the Concept of E-commerce and Business Strategy in Electronic Age and different models of E- Commerce. **CO-6:** Administer and Maintain B2B E-Business sites.
Computer Fundamental	**CO-1:** To make students well familiar with computer and networking fundamentals. **CO-2:** Remember the elementary concept of logic gates and different Boolean laws which helps in reduction of the Boolean expression. **CO-3:** Formulate the basics about the different building block of Circuit. **CO-4:** Understand the configuration of the different types of memory. **CO-5:** Apply the basic understandings for various outcomes of counters and registers. **CO-6:** Analyze the process of transferring logical addresses to physical addresses and develop some ideas for such

	memory configuration.
Communication skill	**CO-1:** . Understand how to apply technical information and knowledge in practical documents for a variety of Professional audiences (including peers and colleagues or management) and b) public audiences. **CO-2:** Recognize, explain, and use the rhetorical strategies and the formal elements of these specific genres of technical communication: technical abstracts, data based research reports, instructional manuals, technical descriptions, web pages, wikis, and correspondence. **CO-3:** Participate actively in writing activities (individually and in collaboration) that model effective scientific and technical communication in the workplace. 10 **CO-4:** . Recognize, explain, and use the rhetorical strategies and the formal elements of these specific genres of technical communication: technical abstracts, data based research reports, instructional manuals, technical descriptions, web pages, wikis, and correspondence. Revise and edit effectively in all assignments, including informal media (such as email to the instructor). **CO-5:** Collect, analyze, document, and report research clearly, concisely, logically, and ethically; understand the standards for legitimate interpretations of research data within scientific and technical communities.

BCA-II

Course outcomes

DBMS	**CO-1:** Apply the concept of Database. **CO-2:** Develop the understanding of different modeling techniques used in DBMS. **CO-3:** Remember the concept of File system and Data. **CO-4:** Illustrate Entity-Relationships through precise E-R Diagrams. **CO-5:** Understand the basic concept and importance of Data Normalization **CO-6:** Determine solutions of complex database problems through Relational data model and SQL .
Programming in C++	**CO-1:** Understanding the features of C++ Programming. **CO-2:** Understanding the advanced features of C++ specifically ,Operator Overloading, Templates, Streams. **CO-3:** Applying the major object-oriented concepts to implement programs, Inheritance and Polymorphism **CO-4:** Implementing different Operations on Functions, Classes & Object, and Constructors. **CO-5:** Gain some practical experience of C++.
Computer Networking & Internet Technology	**CO-1:** To deal with basic ideas of networking domain. **CO-2:** To present the principles of Cryptography in Computer Networks. **CO-3:** To know the classical, advanced encryption standards and techniques, message authentication codes, digital signatures, email. Course Outcomes **CO-4:** Understanding cryptography and network security concepts and application. **CO-5:** Applying security principle in system design. K4 CO3 Detecting network security threats. **CO-6:** Understanding the various cryptographic algorithms.
Shell programming in linux/unix	**CO-1:** To gain knowledge about the usage of shell scripting. **CO-2:** To teach the concepts of using arithmetic operations and looping. 3. To impart knowledge about the creation of files and directories. **CO-3:** Remember the structures of Lists, Tuples and Dictionarie. **CO-4:** Understand the concepts of Input / Output operations in file. **CO-5:** To make students understand the features of Linux operating system **CO-6:** To make students learn the components of Linux
Data structure	**CO-1:** To represent the way of defining Data. **CO-2:** To explain the fundamental techniques for designing and analyzing algorithms. **CO-3:** To study various algorithms of Sorting ,Searching methods in Data structures. Course Outcomes.

	CO-4: Understanding data structures and the concepts of algorithms for dynamic programming. **CO-5:** Applying the data structures algorithms for various applications. K3 CO3. **CO-6:** Be able to design and analyze the time and space efficiency of the data structure.

BCA-III

Course Outcomes

Java	**CO-1:** Applyling java programming language for various programming Applications. **CO-2:** Acquiring knowledge of the structure and model of the java programming language . **CO-3:** Implementing Applets for GUI Concepts. **CO-4:** Analyzing the concepts of Threads, Swings and Files. **CO-5:** Ability to create packages and interfaces. **CO-6:** Ability to implement error handling techniques using exception handling.
Operating System	**CO-1:** Understanding of design issues,mastering in functions, structures and history of operating systems. **CO-2:** Learning various Process Management Concepts including Scheduling, Synchronization, Multithreading and Deadlocks. **CO-3:** Implementing the processes,resource control ,physical and virtual memory,scheduling, I/O and files. **CO-4:** Understanding about Resource Sharing among Users. Familiar with Protection and Security **CO-5:** Mechanisms. Types of Operating Systems including Unix. **CO-6:** Initiation into the process of applying memory management methods and allocation policies.
Software Engineering	**CO-1:** Learning the fundamentals of software engineering concepts. **CO-2:** Understanding common lifecycle processes such as waterfall model, spiral model, prototyping model,evolutionary models etc. **CO-3:** Applying the principles and techniques of software engineering in the architectural design, detail design, and implementation of software applications. **CO-4:** Developing the software using different testing concepts. **CO-5:** Understand the various process models. **CO-6:** Be able to design software by applying the software engineering principles.

Multimedia Tools Applications	**CO-1:** Define Computer Graphics and understand the Primitive Graphics Functions. **CO-2:** Formulate the Coordinate Geometry Equations in Computer Graphics. **CO-3:** Understand the concept and Application of Computer Graphics Algorithms in Procedural and **CO-4:** Object Oriented Programming Languages. **CO-5:** Apply the components of Graphics in Entertainment and Media Industry. **CO-6:** Analyze different Computer Graphics software related to Multimedia and Animation.
CSA	**CO-1:** Understanding of digital system, its organization and architecture. **CO-2:** Apply knowledge of digital electronics logic gate to combinational and sequentialcircuits. **CO-3:** Knowledge of the basics of computer hardware and how software interacts withcomputer hardware. **CO-4:** Apply concepts of assembly language in solving problems. **CO-5:** **I**llustrate the concept of processing I/O organization **CO-6:** Examine different ways ofcommunicating with I/O devices and standard I/O interfaces.

Msc(cs)

Master of Science (Computer Science)

Program Outcomes

PO-1: Provides technology-oriented students with the knowledge and ability to develop.

PO-2: creative solutions. Develop skills to learn new technology.

PO-3: Apply computer science theory and software development concepts to construct computing-based solutions.

PO-4: Design and develop computer programs/computer-based systems in the areas related to algorithms, networking.

PO-5: Ability to learn and use new development tools, software framework, middleware, programming language or methodology to aid in the development of software projects.

PO-6: Ability to define, assess and adhere to software quality practices, and software processes and methodologies.

PO-7: Ability to be an effective member of a multi-disciplinary software project development team with an awareness of individual, professional and ethical responsibilities.

Msc(cs)

Program Specific Outcomes

PSO1:An ability to use current techniques, skills and tools for programming practically.

PSO2:Capability of the students to apply design and development principles in the construction of software systems.

PSO3: Student can develop minor projects and major projects.

PSO4:Enabling the student's practical exposure in the software development field.

PSO5:Entrusting student interests in building their career in the field of IT by providing latest technologies like IoT, Cloud computing, Robotics and so on.

Msc(cs)1st sem

Course Outcomes

Advanced Operating System	**CO-1:** Student can understand internal structure and operations of OS along with various processes including threading, inter process communication and synchronization with I/O operations. **CO-2:** Awareness of computational issues, resources in distributed environment. **CO-3:** To develop mobile computing applications by analyzing their characteristics requirements, selecting the appropriate computing models and software architectures, and applying standard programming languages and tools. **CO-4:** To understand how the underlying wireless and mobile communication networks work, their technical features, and what kinds of applications they can support
Data Structures	**CO-1:** Knowledge of basic data structures and algorithms. **CO-2:** Understand concepts of searching and sorting techniques. **CO-3:** Understand concepts of stacks, queues, lists, trees and graphs. **CO-4:** Able to write algorithms for solving problems with the help of fundamental datastructures.
Object Oriented Programming with C++	**CO-1:** Students will be familiar with the main features of the C++ language. **CO-2:** Students will be able to apply the computer programming techniques to solve practical problems. **CO-3:** Students will be able to understand the difference between object oriented programming and procedural oriented language and data types in C++. **CO-4:** Students will be able to understand the concepts and implementation of constructors and destructors. **CO-5:** Students will be able to develop program using C++ features such as composition of objects, Operator overloading, inheritance, Polymorphism etc. **CO-6:** Students are able to learn C++ data types, memory allocation/deallocations, functions and pointers.
Computer system Architecture	**CO-1:** Understanding of digital system, its organization and architecture. **CO-2:** Apply knowledge of digital electronics logic gate to combinational and sequentialcircuits. **CO-3:** Knowledge of the basics of computer hardware and how software interacts withcomputer hardware. **CO-4:** Apply concepts of assembly language in solving problems. **CO-5:** Illustrate the concept of processing I/O organization and examine different ways ofcommunicating with I/O devices and standard I/O interfaces. **CO-6:** Examine different ways ofcommunicating with I/O devices and standard I/O interfaces.

Msc(cs)2nd sem

Course Outcomes

RDBMS	**CO-1:** Student will be able to understand the basic difference between databases and relational databases **CO-2:** Student will be trained on using SQL queries for retrieving information from the databases. **CO-3:** The student will pursue for comprehensive database certification program on the foundation of **CO-4:** course Student will be provided mechanism for representation of database in to XML for data mining Studies. **CO-5:** . Formulate, using relational algebra, solutions to a broad range of query problems. **CO-6:** . Formulate, using SQL, solutions to a broad range of query and data update problems.
Advanced Computer Network	**CO-1:** Students will understand the basic components of Networking. **CO-2:** Students will understand how these components are used in different project. **CO-3:** Students will understand how to write research paper for innovative idea. **CO-4:** Cryptography technique knowledge for understanding various Algorithm for security. **CO-5:** Internet Security protocol used for e-business and e-Banking security. **CO-6:** Explain the role of protocols in networking.
Visual Basic	**CO-1:** Students list the visual programming concepts. **CO-2:** Explain basic concepts and definitions. **CO-3:** Express constants and arithmetic operations. **CO-4:** Distinguish variable and data types. **CO-5:** Students code visual programs by using Visual Basic work environment. **CO-6:** Distinguish and compose events and methods.
Compiler Design	**CO-1:** Understand the major phases of compilation and to Understand the knowledge of Lex tool &YAAC tool **CO-2:** Develop the parsers and experiment the knowledge of different parsers design without automated tools. **CO-3:** onstruct the intermediate code representations and generation. **CO-4:** Convert source code for a novel language into machine code for a novel computer. **CO-5:** various optimization techniques for dataflow analysis. **CO-6:** draw the dynamic structure of the run-time stack when target code containing procedure/function calls is executed. () Apply code optimizations - apply simple intermediate code optimizations .

Numerical analysis	**CO-1:** Identity and analyze different types of errors encountered in numerical computing. **CO-2:** Apply the knowledge of Numerical Mathematics to solve problems efficiently arising in science, engineering and economics etc. **CO-3:** Utilize the tools of the Numerical Mathematics in order to formulate the real-world problems from the view point of numerical mathematics. **CO-4:** Design, analyze and implement of numerical methods for solving different types of problems, viz. initial and boundary value problems of ordinary differential equations etc. **CO-5:** Work numerically on the ordinary differential equations using different methods through the theory of finite differences. **CO-6:** Apply various interpolation methods and finite difference concepts.

Msc(cs)3rdsem

Course Outcomes

JAVA	**CO-1:** Learn Java programming language which can be utilized to develop windows and internet based software solutions. **CO-2:** Able to understand and apply the knowledge of object-oriented principles, applets, graphical user-interface for scientific and business oriented applications. **CO-3:** It develops advanced Java programming skills that are required to fully utilize the capabilities of this object-oriented, general-purpose programming language. **CO-4:** Explore programming techniques of Java beans and swing. Be aware about Java Enterprise applications, know about java servlets. **CO-5:** Ability to create packages and interfaces. **CO-6:** Ability to implement error handling techniques using exception handling
Computer Graphics	**CO-1:** Apply mathematical geometry and logic to develop Computer programs for elementary graphics operations and to develop scientific and strategic approach to solve complex problems in the domain of Computer Graphics. **CO-2:** Demonstrate an understanding of contemporary graphics hardware. **CO-3:** Ability to draw graphics using line & polygon and ability to perform operations on computer graphics. **CO-4:** Understand and demonstrate geometrical transformations, Segment, Windowing and Clipping, Interaction. **CO-5:** Understand and demonstrate 2D & 3D image processing techniques.
Linux	**CO-1:** Able to understand the Basics of Windows & Linux working **CO-2:** Ability to learn the creation of Windows with various components **CO-3:** Able to performthe shell scripting programs . **CO-4:** Able tocreate file handling utilities by using Linux shell environment.
Compiler Design	**CO-1:** Understand the major phases of compilation and to Understand the knowledge of Lex tool &YAAC tool **CO-2:** Develop the parsers and experiment the knowledge of different parsers design without automated tools. **CO-3:** Construct the intermediate code representations and generation. **CO-4:** Convert source code for a novel language into machine code for a novel computer. **CO-5:** Apply for various optimization techniques for dataflow analysis.

Image Processing	**CO-1:** understand the need for image transforms different types of image transforms and their properties. develop any image processing application. **CO-2:** understand the need for image compression and to learn the spatial and frequency domain techniques of image compression. **CO-3:** understand the rapid advances in Machine vision. **CO-4:** learn different techniques employed for the enhancement of images. **CO-5:** learn different causes for image degradation and overview of image restoration techniques. **CO-6:** understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.
Object Oriented Analysis And Design	**CO-1:** To understand the Object-based view of Systems **CO-2:** To develop robust object-based models for Systems **CO-3:** To inculcate necessary skills to handle complexity in software design **CO-4:** After successful completion of this course, student will be able to demonstrate the importance of modelling in the software development life cycle. **CO-5:** Become familiar with the Unified modelling Language. **CO-6:** Understand the object-oriented approach to analysing and designing systems and software solutions. Employ the Unified modelling Language notations to create effective and efficient system designs.

Msc(cs)4 th sem

Course Outcomes

Artificial Intelligence	**CO-1:** To analyze and formalize the problem as a state space, graph, design heuristics . **CO-2:** Ability to represent solutions for various real-life problem domains using logic based techniques **CO-3:** Understand the numerous applications and huge possibilities in the field of AI **CO-4:** Ability to express the ideas in AI research and programming language related to emerging technology.
Data mining	**CO-1:** Understand Data Warehouse fundamentals, Data Mining Principles **CO-2:** Design data warehouse with dimensional modelling and apply OLAP operations. **CO-3:** Identify appropriate data mining algorithms to solve real world problems **CO-4:** Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining.
Software Engineering	**CO-1:** Learning the fundamentals of software engineering concepts. **CO-2:** Understanding common lifecycle processes such as waterfall model, spiral model, prototyping model,evolutionary models etc. **CO-3:** Applying the principles and techniques of software engineering in the architectural design, **CO-4:** detail design, and implementation of software applications. **CO-5:** Developing the software using different testing concepts.
Advanced Computer Architecture	**CO-1:** Understand multithreading by using ILP and supporting thread-level parallelism (TLP). **CO-2:** Understand the performance and efficiency in advanced multiple-issue processors. **CO-3:** Understand symmetric shared-memory architectures and their performance. **CO-4:** Understand multiprocessor cache coherence using the directory based and snooping class of protocols. **CO-5:** Understand the various models to achieve memory consistency. **CO-6:** Understand the performance of multicore processors using SPEC benchmarks**.**

PGDCA

Post Graduate Diploma in Computer Application

Program Outcomes

PO-1: It will equip the students with skills required for designing, developing applications in Information Technology.

PO-2: Students will able to learn the latest trends in various subjects of computers & information technology.

PO-3: The PG Diploma is aimed at graduates with a computing background and provides a detailed coverage of the key concepts and challenges in data and resource protection and computer software security.

PO-4: To give hands on to students while developing real life IT application as part of the study

PGDCA

Program Specific Outcomes

PSO1: To understand concepts and operations on databases.

PSO2: To apply the knowledge of computer system and design principles in understanding the software and hardware components.

PSO3: Ability to apply knowledge of layered network models, protocols, technologies and topologies.

PSO4: Understand Basic concept of Programming language like procedure oriented language

PSO5: Ability to Understand, analyze and develop general algorithms to apply the knowledge in developing software applications

PGDCA

Course Outcomes

Programming in c	**CO-1:** Analyze a given problem and develop an algorithm to solve the problem **CO-2:** Improve upon a solution to a problem **CO-3:** Use the 'C' language constructs in the right way. **CO-4:** Design, develop and test programs written in 'C'. **CO-5:** Use different data types in a computer program. **CO-6:** Design programs involving decision structures, loops and functions.
Introduction to Software Organization	**CO-1:** To make students well familiar with computer and networking fundamentals. **CO-2:** Remember the elementary concept of logic gates and different Boolean laws which helps in reduction of the Boolean expression. **CO-3:** Formulate the basics about the different building block of Circuit. **CO-4:** Understand the configuration of the different types of memory. **CO-5:** Apply the basic understandings for various outcomes of counters and registers. **CO-6:** Analyze the process of transferring logical addresses to physical addresses and develop some ideas for such memory configuration.
Office Automation and tally	**CO-1:** Remember the basic terminologies used for the Computers as well as familiarize with various Number Systems. **CO-2:** Discuss the Evolution of various types of the Operating system. **CO-3:** Apply different operations of the Windows Operating Environment. **CO-4:** Illustrate the use of Spreadsheets and Database Packages. **CO-5:** Compare and Co-relate different algorithms and flowcharts. **CO-6:** Create a basic foundation of representing the solution of simple problems using Algorithm and Flowcharts.
Programming in visual Basic	**CO-1:** Students list the visual programming concepts. **CO-2:** Explain basic concepts and definitions. **CO-3:** Express constants and arithmetic operations. **CO-4:** Distinguish variable and data types. **CO-5:** Students code visual programs by using Visual Basic work environment. **CO-6:** Distinguish and compose events and methods.

DBMS	**CO-1:** Apply the concept of Database. **CO-2:** Develop the understanding of different modeling techniques used in DBMS. **CO-3:** Remember the concept of File system and Data. **CO-4:** Illustrate Entity-Relationships through precise E-R Diagrams. **CO-5:** Understand the basic concept and importance of Data Normalization **CO-6:** Determine solutions of complex database problems through Relational data model and SQL .
Essential of e commerce and html	**CO-1:** Understanding the use of HTML tags. **CO-2:** Learning and using Cascading Style Sheet. **CO-3:** Understanding the concept of JavaScript. **CO-4:** Designing and Developing web pages using PHP, HTML.Understand the Concept of E-commerce and Business Strategy in Electronic Age and different models of E-Commerce. **CO-5:** Administer and Maintain B2B E-Business sites. **CO-6:** Understand the Internet Architecture and Electronic Payment System.

DCA

Diploma in Computer Application

Program Outcomes

PO-1：Equips the students with skills required for designing, developing applications in Information Technology.

PO-2：Students will able to learn the latest trends in various subjects of computers & information technology.

PO-3：DCA program is aimed towards building prospective career in the field of computer application.

PO-4：The program is designed with the objective to provide knowledge and skills in the various aspects of computer applications and core programming.

PO-5：Students will also be trained in the latest trends of information technology.

PO6: The Goal of Program to prepare basic computer Knowledge and Operational proficiency.

DCA

Diploma in Computer Application

Program Outcomes

PSO1: Students gain thorough understanding about critical concepts like object oriented techniques, programming languages & applications development.

PSO2: This program helps learners acquire required skills in Information Technology.

PSO3: The curriculum of this program ensures that learners gain thorough understanding about critical concepts like Tally, Basic C programming, etc.

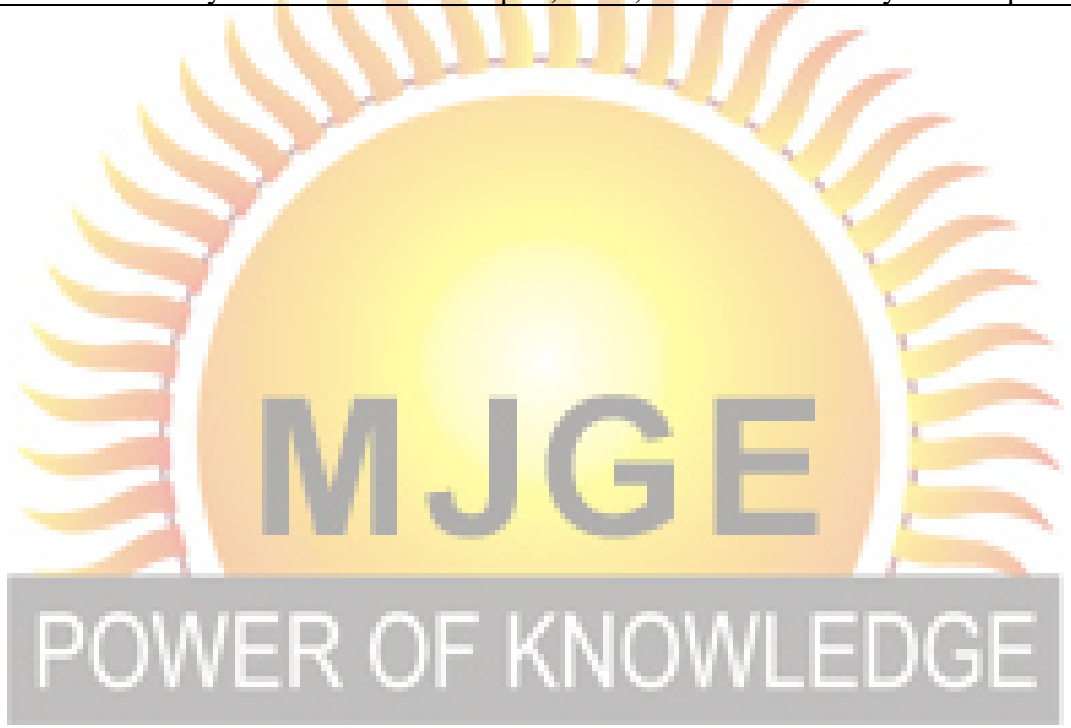
PSO4: Entrusting student interests in building their career in the field of IT by providing latest.

DCA

Course Outcomes

Programming in c	**CO-1:** Analyze a given problem and develop an algorithm to solve the problem **CO-2:** Improve upon a solution to a problem **CO-3:** Use the 'C' language constructs in the right way. **CO-4:** Design, develop and test programs written in 'C'. **CO-5:**Use different data types in a computer program. **CO-6:** Design programs involving decision structures, loops and functions.
Essential of Information Technology and OS:.	**CO-1:** To make students well familiar with computer and networking fundamentals. **CO-2:** Remember the elementary concept of logic gates and different Boolean laws which helps in reduction of the Boolean expression. **CO-3:** Formulate the basics about the different building block of Circuit. **CO-4:**Understand the configuration of the different types of memory. **CO-5:** Apply the basic understandings for various outcomes of counters and registers. **CO-6:** Analyze the process of transferring logical addresses to physical addresses and develop some ideas for such memory configuration.
Essentials of Office Automation	**CO-1:** Remember the basic terminologies used for the Computers as well as familiarize with various Number Systems. **CO-2:** Discuss the Evolution of various types of the Operating system. **CO-3:** Apply different operations of the Windows Operating Environment. **CO-4:** Illustrate the use of Spreadsheets and Database Packages. **CO-5:** Compare and Co-relate different algorithms and flowcharts. **CO-6:** Create a basic foundation of representing the solution of simple problems using Algorithm and Flowcharts.
Programming in visual Basic	**CO-1:** Students list the visual programming concepts. **CO-2:** Explain basic concepts and definitions. **CO-3:** Express constants and arithmetic operations. **CO-4:**Distinguish variable and data types. **CO-5:** Students code visual programs by using Visual Basic work environment. **CO-6:** Distinguish and compose events and methods.

DBMS	**CO-1:** Apply the concept of Database. **CO-2:** Develop the understanding of different modeling techniques used in DBMS. **CO-3:** Remember the concept of File system and Data. **CO-4:**Illustrate Entity-Relationships through precise E-R Diagrams. **CO-5:** Understand the basic concept and importance of Data Normalization **CO-6:** Determine solutions of complex database problems through Relational data model and SQL .
E-commerce	**CO-1:** An ability to identify and analyze user needs and take them into account in the selection, creation, **CO-2:** evaluation and administration of computer-based systems. **CO-3:** An ability to effectively integrate IT-based solutions into the user environment. **CO-4:**An ability to use current techniques, skills, and tools necessary for computing practice.



BSC

Program outcomes

Bachelor of Science (BSc) offers theoretical as well as practical knowledge about different subject areas. These subject areas include Physics, Chemistry, Mathematics and Biology and other fields depending on the specialisation a student opts. This programme course is most beneficial for students who have a strong interest and background in Science and Mathematics. The course is also beneficial for students who wish to pursue multi and inter-disciplinary science careers in future.
Following are the various programme outcomes:

PO1. This course forms the basis of science and comprises of the subjects like physics, chemistry, biology, zoology and mathematics.

PO2. It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace.

PO3. After the completion of this course students have the option to go for higher studies i.e. M. Sc and then do some research for the welfare of mankind.

PO4. After higher studies students can join as scientist and can even look for professional job oriented courses.

PO5. This course also offers opportunities for serving in Indian Army, Indian Navy, Indian Air Force as officers.

PO6. Students after this course have the the option to join Indian Civil Services as IAS, IFS etc

BSC

PROGRAM SPECIFIC OUTCOMES

PSO1. Demonstrate mastery of Computer Science in the following coreknowledge areas

- Data Structures and Programming Languages
- Databases, Software Engineering and Development
- Computer Hardware and Architecture

PSO2. Apply problem-solving skills and the knowledge of computer science tosolve real world problems.

PSO3. Develop technical project reports and present them orally among the users

PSO4. Communicate computer science concepts, designs, and solutions effectively and professionally

PSO5. Apply knowledge of computing to produce effective designs andsolutions for specific problems

PSO6. Use software development tools, software systems, and modern computing platforms

Bsc-1st year

COURSE OUTCOMES

COMPUTER FUNDAMENTALS	**CO-1** To understand the design structure of a simple editor. **CO-2** To understand the design structure of Assembler and macro processor for a hypothetical simulated computer. **CO-3** To understand the working of linkers and loaders and other development utilities. CO-4 To understand Complexity of Operating system as a software **CO-5** Understand the concept of networking models, protocols, functionality of each layer. **CO-6** Understand wired and wireless networks, its types, functionality of layer.
PROGRAMMING IN C LANGUAGE	**CO-1** To understand Create and initialize variables, constant, arrays, pointers, structures and unions. **CO-2** Create the function that can receive variables, arrays, pointers and structures. **CO-3** . Create the function that can receive variables, arrays, pointers and structures. **CO-4** To understand Complexity of Operating system as a software. **CO5** Manipulate values of variables, arrays, pointers, structures, unions and files . **CO-6** Create open, read, manipulate, write and close files,Select and use appropriate data structures for the given problems.

Bsc-2nd year

COURSE OUTCOMES

COMPUTER HARDWARE	**CO-1** Describe the Intel 8085/8086 architecture with explanation of internal organization of some popular microprocessors/microcontrollers. **CO-2** Construction of a maintainable assembly language program for an algorithm. **CO-3** To Conclude the Intel 8085/8086 real mode memory addressing. **CO-4** Describe the functioning of different peripheral ICs. **CO-5** Designing of microprocessors/microcontrollers-based systems. **CO-6** Plan circuits for various applications using microcontrollers.
COMPUTER SOFTWARE	**CO-1** Implement interactive web page(s) using HTML, CSS and JavaScript. **CO-2** Design a responsive web site using HTML5 and CSS3. **CO-3** Demonstrate Rich Internet Application. **CO-4** Build Dynamic web site using server side PHP Programming and Database connectivity. **CO-5** Describe and differentiate different Web Extensions and Web Services. **CO-6** Demonstrate web application using Python web Framework-Django

Bsc-3rd year

COURSE OUTCOMES

PRINCIPLES OF COMPUTER SCIENCE	**CO-1** To understand the design structure of a simple editor. **CO-2** To understand the design structure of Assembler and macro processor for a hypothetical simulated computer. **CO-3** To understand the working of linkers and loaders and other development utilities. **CO-4** To understand Complexity of Operating system as a software **CO-5** Understand the concept of networking models, protocols, functionality of each layer. **CO-6** Understand wired and wireless networks, its types, functionality of layer.
PROGRAMMING IN C LANGUAGE	**CO-1** To understand Create and initialize variables, constant, arrays, pointers, structures and unions. **CO-2** Create the function that can receive variables, arrays, pointers and structures. **CO-3** . Create the function that can receive variables, arrays, pointers and structures. **CO-4** To understand Complexity of Operating system as a software. **CO-5** Manipulate values of variables, arrays, pointers, structures, unions and files . **CO-6** Create open, read, manipulate, write and close files,Select and use appropriate data structures for the given problems.

BBA

Programme Outcomes

PO1: To provide adequate basic understanding about Management Education among the student.

PO2: To prepare students to exploit opportunities being newly created in the Management Profession.

PO3: To develop appropriate skills in the students so as to make them competent and provide themselves self-employment.

PO4: To work well in teams, including virtual settings.

PO5: To understand finance and other core business content.

PO6: To recognize and solve business problems in an ethical manner.

PO7: To communicate business information professionally.

PO8: To build the department as a centre of excellence for imparting high quality management education at the undergraduate level.

PO9: To stimulate in students an interest in research and initiate them into research methodologies.

PO10: To foster thinking minds that are sensitive to societal needs and issues thus making them good human beings and responsible members of the society.

PO11: To provide an environment that facilitates all-round development of the student personality

BBA
Programme Specific Outcomes

PO1: To provide adequate basic understanding about Management Education among the students.

PO2: To prepare students to exploit opportunities being newly created in the Management Profession.

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PO11: To provide an environment that facilitates all-round development of the student personality

BBA

COURSE OUTCOMES

Computer Application in Business	**CO-1:** Helps understand about information system used in business. **CO-2:** Provides knowledge of computers related to MS office, tally, DBMS required for everyday transactions of business. **CO-3:** Helps accomplish various business projects, utilizes business theories internal resources and technology. **CO-4:** Apply different operations of the Windows Operating Environment.

B.COM
Bachelor of Commerce
Programme Outcomes

PO1: This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.

PO2: After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.

PO3: Capability of the students to make decisions at personal & professional level will increase after completion of this course.

PO4: Students can independently start up their own Business.

PO5: Students can get thorough knowledge of finance and commerce.

PO6: The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

B.COM
Programme Specific Outcomes

PSO1: The students can get the knowledge, skills and attitudes during the end of the B.com degree course.

PSO2: By goodness of the preparation they can turn into a Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor, Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.

PSO3: Students will prove themselves in different professional exams like C.A. , C S, CMA, MPSC, UPSC. As well as other coerces.

PSO4: The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.

PSO5: Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.

PSO6: Students can also get the practical skills to work as accountant, audit, assistant, tax consultant, and computer operator As well as other financial supporting services.

PSO7: Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

PSO8: Students will be able to do their higher education and can make research in the field of finance and commerce.

B.COM-I
Course Outcomes

COMPUTER FUNDAMENTALS AND OFFICE AUTOMATION)	**CO-1:** Awareness of basics of computer. **CO-2:** To prepare students in understanding ICT basics and to make aware of Office automation using MS- Office. **CO-3:** Create a basic foundation of representing the solution of simple problems using Algorithm and Flowcharts. **CO-4:** Illustrate the use of Spreadsheets and Database Packages. **CO-5:** Understand the configuration of the different types of memory.
COMPUTERIZED FINANCIAL ACCOUNTING	**CO-1:** To prepare students about important financial accounting concepts and understand usage of • Tally ERP software. **CO-2:**Apply the knowledge of quantitative tools & techniques in the interpretation of data for managerial decision. **CO-3:** Awareness about capital structure and theories of capital structure, cost of capital in wide aspects, dividend policies and various dividend models, working capital management **CO-4:** Awareness about Programming of foxpro**.** **CO-5:** Understand the Voucher Entry, prepare financial statement .

B.COM-II
Course Outcomes

INTERNET APPLICATION & E-COMMERCE	**CO-1:** Understanding the use of HTML tags. **CO-2:** Learning and using Cascading Style Sheet. **CO-3:** Understanding the concept of JavaScript. **CO-4:** Designing and Developing web pages using PHP, HTML. **CO-5:** Understand the Concept of E-commerce and Business Strategy in Electronic Age and different models of E- Commerce. **CO-6:** Administer and Maintain B2B E-Business
RELATIONAL DATABASE MANAGEMENT SYSTEM	**CO-1:** Apply the concept of Database. **CO-2:** Develop the understanding of different modeling techniques used in DBMS. **CO-3:** Remember the concept of File system and Data. **CO-4:** Illustrate Entity-Relationships through precise E-R Diagrams. **CO-5:** Understand the basic concept and importance of Data Normalization **CO-6:** Determine solutions of complex database problems through Relational data model and SQL

B.COM-III
Course Outcomes

PROGRAMMING IN VISUAL BASIC	**CO-1:** Students list the visual programming concepts. **CO-2:** Explain basic concepts and definitions. **CO-3:** Express constants and arithmetic operations. **CO-4:** Distinguish variable and data types. **CO-5:** Students code visual programs by using Visual Basic work environment. **CO-6:** Distinguish and compose events and methods.
SYSTEM ANALYSIS, DESING & MIS	**CO-1:** Apply a framework and process for aligning and organization's IT objectives with business strategy. **CO-2:** Defend the strategic value of information resources for an organization. **CO-3:** Participate in an organization's information systems and technology decisionmaking processes. **CO-4**: Identify ways information systems & technology may improve an organization's performance, including improving organizational processes, decision-making, collaboration, and personal productivity. **CO-5:** Define what a manager should be able to expect from an IT department in an organization

Master of Science-Mathematics
M.sc (Maths)
Programme Outcomes

PO1: Equip the student with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.

PO2: Prepare students for pursuing research or careers in industry in mathematical sciences and allied fields.

PO3: Imbibe effective scientific and/or technical communication in both oral and writing.

PO4: Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.

PO5: Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.

M.sc (Maths)
Programme Specific Outcomes

Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.

PSO1: Inculcate mathematical reasoning.
PSO2: To develop ones own learning capacity.
PSO3: Prepare and motivate students for research studies in mathematics and related fields.
PSO4: Develop abstract mathematical thinking.
PSO5: Assimilate complex mathematical ideas and arguments.

M.Sc.(Maths) III Semester
Course Outcomes

Fundamentals of Computer Science (Object Oriented Programming and Data Structure)	CO1: Understanding the features of C++ Programming. CO2: Understanding the advanced features of C++ specifically ,Operator Overloading, Templates, Streams. CO3: Applying the major object-oriented concepts to implement programs, Inheritance and Polymorphism. CO4: Understanding data structures and the concepts of algorithms for dynamic programming. CO5: Applying the data structures algorithms for various applications. K3CO3.
Programming in C(With ANSI Features)(I)	CO1: Analyze a given problem and develop an algorithm to solve the problem . CO2: Improve upon a solution to a problem. CO3: Use the 'C' language constructs in the right way. CO4: Design, develop and test programs written in 'C'. CO5: Use different data types in a computer program. CO6: Design programs involving decision structures, loops and functions.

M.Sc.(Master of Science)-Mathematics IVSemester
Course Outcomes

Fundamentals of Computer Science (Object Oriented Programming and Data Structure)	CO1: Understanding the features of C++ Programming. CO2: Understanding the advanced features of C++ specifically ,Operator Overloading, Templates, Streams. CO3: Applying the major object-oriented concepts to implement programs, Inheritance and Polymorphism. CO4: Understanding data structures and the concepts of algorithms for dynamic programming. CO5: Applying the data structures algorithms for various applications. K3 CO3. CO6: Be able to design and analyze the time and space efficiency of the data structure.
Programming in C(With ANSI Features)(II)	CO1: Analyze a given problem and develop an algorithm to solve the problem. CO2: Improve upon a solution to a problem. CO3: Use the 'C' language constructs in the right way. CO4: Design, develop and test programs written in 'C'. CO5: Use different data types of pointer concept. CO6: Design programs involving decision structures, loops and functions..