

**SETH NARSINGDAS MOR COLLEGE OF ARTS & COMMERCE &  
SMT. G. D. SARAF SCIENCE COLLEGE, TUMSAR.  
PROGRAMME OUTCOME DEPARTMENT OF COMPUTER SCIENCE**

**Course Outcome of B. Sc. Computer Science**

**B.Sc. Part I Semester I**

Paper-I :-        Programming in C  
Paper-II :-        Fundamentals of Information Technology

**B.Sc. Part I Semester II**

Paper-I :-        Object Oriented Programming using 'C ++'  
Paper-II :-        System Analysis and Design

**B.Sc. Part II Semester III**

Paper I :-        Data Structures  
Paper II :-        Operating Systems

**B.Sc. Part II Semester IV**

Paper I :-        Java Programming  
Paper II :-        Linux Operating System

**B.Sc. Final Semester V**

Paper I :-        Visual Basic Programming  
Paper II :-        Database Management System

**B.Sc. Final Semester VI**

Paper I :-        Compiler Construction  
Paper II :-        SQL AND PL/SQL

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**B.Sc. Part-I, Semester I**

**Course name: Programming in 'C' (Paper-I)**

**Course outcomes :**

Unit-I

Able to develop and solve problems using algorithm, flowchart & pseudo code.

Unit-II

Able to Understand the basic elements of imperative programming: tokens, flow control, library functions etc.

Unit-III

Able to design and Implement programs using basic data structures arrays, strings and library functions.

Unit-IV

Able to create and use data types: structure, union & pointers. Able to design and Implement programs using concepts of file handling.

**Course name: Fundamentals of Information Technology (Paper-II)**

**Course outcomes :**

Unit-I

Able to understand basic components of digital computers, the various number systems and Addition, Subtraction of binary numbers.

Unit-II

Able to understand Semiconductor RAM and ROM memories, Cache, Flash memories and Secondary storage devices.

Unit-III

Able to understand various peripheral devices like Input and Output devices of Computer systems.

Unit-IV

Able to understand the importance of computer network and the network topology.

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**B.Sc. Part-I, Semester II**

**Course name: Object Oriented Programming using 'C++' (Paper-I)**

**Course outcomes :**

**Unit-I**

Able to understand the basics of OOP and Object oriented approach to design software.  
Able to design and Implement programs using classes and objects

**Unit-II**

Able to design and Implement programs using constructor, destructor and operator overloading.

**Unit-III**

Able to design and Implement programs using dynamic objects.  
Able to specify the types of inheritance and use them in programs.

**Unit-IV**

Able to design and Implement programs using virtual function and the concept of exception handling.

**Course name: System Analysis and Design (Paper-II)**

**Course outcomes:**

**Unit-I**

Able to define and describe the phases of the system development life cycle.  
Able to Perform a feasibility study.

**Unit-II**

Able to develop data flow diagrams and decision tables.

**Unit-III**

Able to determine methods for evaluating the effectiveness and efficiency of a system.

**Unit-IV**

Able to Work as an effective team member on assigned projects.

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**B.Sc. Part-II, Semester III**

**Course name: Data Structures (Paper-I)**

**Course outcomes :**

**Unit-I**

Able to understand the concept of stack, linked list, Memory allocation & garbage collection and applications of Data Structures.

**Unit-II**

Able to understand the concept of stack and their implementation using basic data structure & algorithms. Able to design recursive algorithms.

**Unit-III**

Able to understand and analyze searching/sorting algorithms.

**Unit-IV**

Able to understand the concepts of tree, graph and their implementation using basic data structure & algorithms.

**Course name: Operating Systems (Paper-II)**

**Course outcomes:**

**Unit-I**

Able to describe process management and concepts of threading, multitasking, IPC.

**Unit-II**

Able to differentiation of various scheduling algorithms and identify the reasons of deadlock and their remedial measures in an operating system.

**Unit-III**

Able to describe various memory management techniques.

**Unit-IV**

Able to understand representation of file system interface.  
Able to analyze disk scheduling algorithms for efficient utilization.  
Able to apply the concepts of operating system to study Linux.

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**B.Sc. Part-II, Semester IV**

**Course name: Java Programming (Paper-I)**

**Course outcomes :**

Unit-I

Able to understand concept of Object Oriented Programming & Java Programming

Constructs.

Unit-II

Able to understand basic concepts of Java such as operators, classes, objects, inheritance, packages ,Enumeration and various keywords.

Unit-III

Able to understand the concept of exception handling and Input/Output operations.

Unit-IV

Able to design the applications of Java & Java applet. Able to Analyze & Design the concept of Event Handling and Abstract Window Toolkit.

**Course name: Linux Operating System (Paper-II)**

**Course outcomes :**

Unit-I

Able to login & logout LINUX OS.

Able to understand & manage directory structure.

Able to understand shell, shell program & create user account.

Able to understand & use basic commands of LINUX OS.

Unit-II

Able to use vi editor for creating text files.

Able to use & manage H/W devices (Floppy disk, Hard disk, Printers etc.) in Linux OS.

Able to backup/restore files.

Unit-III

Able to maintain user accounts, change password, create group accounts, grant access to files, change file ownership, protect files, make a file read-only.

Able to manage processes.

Unit-IV

Able to manage disk space using df, du commands.

Able to communicate with users using utilities write, wall, talk, etc.

Able to use GUI using KDE , GNOME Desktop environment.

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**B.Sc. Final, Semester V**

**Course name: Visual Basic Programming (Paper-I)**

**Course outcomes :**

Unit-I

Able to Explore Visual Basic's Integrated Development Environment (IDE).

Unit-II

Able to write and apply procedures, sub-procedures, and functions to create manageable code.

Able to create one and two dimensional arrays for sorting, calculating, and displaying of data.

Unit-III

Able to create database applications using DAO data control.

Unit-IV

Able to create database applications using ADO data control.

**Course name: Database Management Systems (Paper-II)**

**Course outcomes :**

Unit-I

Able to differentiate Database management system and file processing system.  
Study of different data models.

Unit-II

Able to build conceptual models using Entity-Relationship (ER) diagrams.

Unit-III

Able to understand the theory and use of the relational model.  
Able to convert from an ER schema to a relational schema.

Unit-IV

Able to normalize databases.

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**B.Sc. Final, Semester VI**

**Course name: Compiler Construction (Paper-I)**

**Course outcomes :**

Unit-I

Able to identify and understand different phases and passes of compiler and their functioning.

Unit-II

Able to understand the concept of syntax analysis and to solve the problems of predictive parsing.

Unit-III

Able to differentiate between top down and bottom up parsing and understand syntax directed translation techniques.

Unit-IV

Able to apply code optimization and code generation techniques.

**Course name: SQL and PL/SQL (Paper-II)**

**Course outcomes :**

Unit-I

Able to use SQL sublanguages for designing, querying & administering databases.

Unit-II

Able to create views & use PL/SQL programming constructs (conditional & Iterative structures) in a PL/SQL application.

Unit-III

Able to use cursor, procedure & handle exceptions in PL/SQL applications.

Unit-IV

Able to use function & create triggers to solve business challenges.