COURSE- Bachelor of Computer Science

Program Outcome(PO)

PO
After completing the three year degree program, students will be able to: Attain a strong base to pursue higher education in the field of Computer Science and skill to use modern computing tools and techniques for learning and developing software solutions.

Program Specific Outcome(PSO)

PSO
After Completing Bachelor of Computer Science, the student will be able to demonstrate a deep and analytical understanding of the Mathematics, Computer science and Physics subjects. The student can pursue studies in any of the above subjects too.

Course Outcomes

I Year Semester-I

Course: CSC-101 Computer & Programming Fundamental

CO-101 **Understand the complete fundamentals of Computer System**

Course: CSC-102 PC Software

CO-102 **Explain Windows and its Features including Windows Accessories and complete knowledge of Ms- Office.**

Course:BM-111 Algebra

CO-111 **Understand Matrices, Polynomial equations and solutions of cubic equations.**

Course: BM-112 Calculus

CO-112 **Understand concepts like Successive differentiation, Cartesian cures and quadrature.**

Course: BM-113 Solid Geometry

CO-113 **Understand and apply second degree equations, sphere, central conicoids, and parabola.**

Course:PH-101 Classical Mechanics & Theory of relativity

CO-101 **Apply transformation equations, generalized notations, applications of theory of relativity.**

Course: PH-102 Electricity, Magnetism & Electromagnetic Theory

CO-102 **Use of Vector basic and electric field, electromagnetism and circuit analysis.**

Course: Eng-101 English (BSc)-I

CO-101 **ImproveLSRW-listening, speaking, reading and writing skills and their lated sub-skills.**

I Year Semester-II

Course: CSC- 201 Programming in C

CO- **Knowledge of Operators, Data types, Array, Functions and can develop**

201 **programs in C language.**

Course: <u>CSC- 202 Logical Organization of Computer</u>

CO-202 **Understand Number System, Logic Gates and various Combinational circuits.**

Course: <u>BM-121 Number Theory & Trigonometry</u>

CO-121 **Expansion of trigonometric functions, various theorems of Gauss.**

Course: <u>BM-122 Ordinary Differential Equation</u>

CO-122 **Explain the concept of Orthogonal trajectories and linear differential equations of second order.**

Course: <u>BM-123 Vector Calculus</u>

CO-123 **Applications of Vector integration, Vector divergence.**

Course:<u>PH-201 Properties of Matter & Kinetic Theory of Gases</u>

CO-201 **Understand and apply moment of Inertia, kinetic theory of Gases.**

Course: <u>PH-202 Semiconductor Devices</u>

CO-202 **Discuss the applications of transistors, amplifiers and oscillators.**

Course: <u>Eng-201 English (BSc)-II</u>

CO-201 **Writing Official letters/applications and Accuracy in using English in situations (for example: greetings, in the post office, catching at rain, at a bank, making a telephone call, buying vegetables, at the hospital,on the bus etc.**

II Year- Semester-III

Course: <u>CSC-301 Data Structure</u>

CO-301 **Applying String operations, Pattern matching algorithms and implementing algorithms using various data structures like Arrays, stacks, queues,Deques, Priority Queues,linked list,trees ,graphs.**

Course: <u>CSC-302 Software Engineering</u>

CO-302 **Understand and apply Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table ,Decision tress, Structured English,Entity-Relationship diagrams, Cohesion and Coupling.Gantt chart,PERTChart.**

Course: <u>BM-231 Advance Calculus</u>

CO-231 **Understand Lagrange's mean value theorem, homogeneous functions and locus of center of spherical curvature.**

Course: <u>BM-232 Partial Differential Equation</u>

CO-232 **Understand; apply partial and linear differential equations of second and higher orders.**

Course: <u>BM-233 Statics</u>

CO-233 **Frictions and Forces in three dimensions.**

Course: PH-301 Computer Programming & Thermodynamics

CO-301 **Computer Organization, Applications of Fortran programming and various laws of thermodynamics.**

Course: PH-302 Wave & Optics-I

CO-302 **Understand various laws of Interference and diffraction.**

Course: ST-301 Elementary Inference

CO-301 **Apply hypothesis, Statistical estimation and large sample test.**

Course: ST-302 Sample Survey

CO-302 **Describe various sampling methods and estimation.**

II Year- Semester-IV

Course : CSC- 401 Object Oriented Programming with C++

CO-401 **Develop simple applications using class, objects, constructors and applications using Concepts of Polymorphism, Function Overloading, Inline Functions.**

Course : CSC- 402 Operating System

CO-402 **Define, restate, discuss, and explain the policies for scheduling, deadlocks.**

Course : BM-241 Sequence & Series

CO-241 **Applications of Cauchy's sequence, infinite series and real sequence.**

Course : BM-242 Special Function & Integral Transforms

CO-242 **Discuss Laplace transformation. Fourier analysis and solutions to various differential equations.**

Course : BM-243 Programming in C and Numerical Methods

CO-243 **Knowledge of Operators, Data types, Array, Functions and can develop programs in C language and solutions to simultaneous linear equations.**

Course : PH-401 Statistical Physics

CO-401 **Understand and apply macroscopic and microscopic systems, probability theory, postulates of statistical physics and Quantum stats.**

Course : PH-402 Wave & Optics-II

CO-402 **Discuss laws of Polarization, Fourier analysis and Fourier transformation.**

Course : ST-401 Parametric & Non-parametric Test

CO-401 **Apply Chi-square distribution and various oher distributions like F,T and non parametric test.**

Course: ST-402 Design of experiments

CO-402 **Design and Analysis of Anova , CRD, RBD and LSD.**

III Year- Semester-V

Course: CSC-501 Database Management System

CO-501 **Understand and explain data, Data base System Architecture, Data Independence.**

Course: CSC-502 Web Designing

CO-502 **Understand various HTML tags, tables, Frames and Forms.**

Course: BM-351 Real Analysis

CO-351 **Applications of Improper integrals and their convergence, various examples of metric space and continuous function.**

Course: BM-352 Groups & Rings

CO-352 **Identify various types of Groups, Polynomial Rings and permutation groups.**

Course: BM-353 Numerical Analysis

CO-353 **Understand and perform Computer Arithmetic: Floating-point representation of numbers, arithmetic operations with normalized floating-point numbers and their consequences, significant figures. Error in number representation-inherent error, truncation, absolute, relative, percentage and round-off error and apply Iterative Methods.**

Course: PH-501 Quantum & Laser Physics

CO-501 **Applications of Schrodinger wave equation, absorption and emission of radiation, threshold**

Course: PH-502 Nuclear Physics

CO-502 **Applications of Alpha disintegration and its theory, interaction & absorption of Gamma ray.**

Course: ST-501 Applied Statistics

CO-501 **Understand and analyze time series, various demographic methods & index numbers**

Course: ST-502 Numerical Methods & Fundamental of Computer

CO-502 **Understand various numerical methods like Interpolation, Extrapolation , Newton's formula ,Trapezoidal rule &Simpson rule**

III Year Semester-VI

Course: CSC-601 Relational Database Management System

CO-601 **Understand and describe Functional Dependencies and Normalization and Understand SQL, PL/SQL.**

Course: CSC- 602 Computer Networks

CO-602 **Describe how computer networks are organized with the concept of layered Approach and Explain various transmission media.**

Course: BM-361 Real & Complex Analysis

CO-361 **Discuss mapping by elementary functions, Extended stereographic projection of Complex numbers & Fourier series**

Course: [BM-362 Linear Algebra](#)

CO-362 **Understand Vector space, Isomorphism of Vector space, Algebra of linear transformation & Eigen vectors of linear transformations**

Course: [BM-363 Dynamics](#)

CO-363 **Calculate & Apply velocity, Acceleration, Mass , Momentum and Force & Motion**

Course: [PH-601 Solid States & Nano Physics](#)

CO-601 **Discuss Crystal structure, X-Ray diffraction, Super conducting system & Importance of nano scale & nano technology.**

Course: [PH-602 Atomic & Molecular Spectroscopy](#)

CO-602 **Various quantization laws Orbital magnetic dipole, Penetrating & non Penetrating orbits**

Course: [ST-601 Statistical Quality Control](#)

CO-601 **Describe Various statistical quality control uses, Acceptance sampling & various laws of demand & supply**

Course: [ST-602 Operational Research](#)

CO-602 **Meaning & necessity of various OR Models, Graphical solutions of LPP & various artificial variable techniques**