

<b>Yews National Senior College, Nashik Program Specific Outcomes - BSc(Computer Science)</b>	
	<b>Problem Solving using Computer and 'C' programming and practical</b>
PSO1	To develop Problem Solving abilities using computers
PSO2	To teach basic principles of programming
PSO3	To develop skills for writing programs using 'C'
	<b>Basic 'C' Programming and Database Handling practical's</b>
PSO1	Design and implement a 'C' programs for simple problems
PSO2	Understand appropriate use of data types and array structures
PSO3	Understand use of appropriate control structures
	<b>DATA STRUCTURES USING 'C'</b>
PSO1	To learn the systematic way of solving problem
PSO2	To understand the different methods of organizing large amount of data
PSO3	To efficiently implement solutions for specific problems Prerequisites: Knowledge of C Programming Language
	<b>Data structures Practical's and C++ Practical's</b>
PSO1	Design and implement Data structures and related algorithms
PSO2	Understand several ways of solving the same problem
	<b>Database Practical's &amp; Mini Project using Software Engineering techniques</b>
PSO1	Understanding the use of cursors, triggers, views and stored procedures
PSO2	Understanding the steps of system analysis and design
PSO3	Understanding Data requirements for a specific problem domain
	<b>Object Oriented Concepts using C++</b>
PSO1	Acquire an understanding of basic object oriented concepts and the issues involved in effective class design
PSO2	Write C++ programs that use object oriented concepts such as information hiding, constructors, destructors, inheritance etc..
	<b>Architecture, Interfacing &amp; Programming</b>
PSO1	To study the basics of 8051 microcontroller
PSO2	To study the Programming and interfacing techniques of 8051
PSO3	To apply knowledge of 8051 to design different application circuits

<b>Yews National Senior College, Nashik Course Outcomes-B.Sc.(Computer Science)</b>	
	<b>Problem Solving using Computer and 'C' programming and practical</b>
CO1	The course is designed to provide complete knowledge of C language
CO2	To develop logics which will help to create programs, applications in C.
CO3	To develop problem solving abilities using a computer.
CO4	To develop problem solving abilities using a computer.
	<b>Database Management System and Practical</b>
CO1	Solve problems using appropriate set, function, and relational models.

CO2	Design E-R Model for given requirements and convert the same into database tables. Use SQL.
CO3	Populate and query a database using SQL DML/DDDL commands.
CO4	Normalize a database.
	<b>Mathematics and practical</b>
CO1	A students should be able to work with graphs and identify certain parameters and properties of the given graphs
CO2	Students should be able to perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
CO3	A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture
CO4	A students should be able to solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
	<b>Statistics and practical</b>
CO1	A student should able to understand the relationship between two variables using scatter plot.
CO2	A student should be able to compute coefficient of correlation, coefficient of regression.
CO3	To analyse data pertaining to attributes and to interpret the results.
CO4	A student should be able to fit the Normal distribution.
CO5	A student should be able to understand the trend in time series and how A student should be remove it.
	<b>Electronics and Practical</b>
CO1	Student will be able to identify the electronics component as well as they understand the working of component.
CO2	They also study the used of various electronics component and instrument
CO3	Student can solve the problems on binary code gray code, BCD.
CO4	They can be able to design small digital system.
	<b>Data Structure using 'C'</b>
CO1	Student Will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
CO2	Students will be able to apply concepts learned in various do mains like DBMS, compiler construction etc.
CO3	Students will be able to use linear and non-linear data structures like stacks, queues, linked list etc.
CO4	To study the various structures or methods of organizing data in computer's memory and efficiently implement them.
	<b>Relational Database Management System</b>
CO1	To study database concepts and relation between database.
CO2	To study logical operations that could be performed over the data
CO3	To study data transaction and security.
CO4	To study client server architecture.
	<b>Data structures Practical's and C++ Practical's</b>
CO1	Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
CO2	Understand dynamic memory management techniques using pointers, constructors, destructors, etc.
CO3	Describe the concept of function overloading, operator

	Overloading, virtual functions and polymorphism.
CO4	To study the various structures or methods of organizing data in computer's memory and efficiently implement them.
	<b>Database Practical's &amp; Mini Project using Software Engineering techniques</b>
CO1	Implement query and PL/Sql program of simple problem Understand the use of data types and loops.
CO2	Create the documentation of simple project using the concepts of Software engineering techniques.
CO3	Designing Data base as per the Data requirements
CO4	Understanding the steps of system analysis and design
	<b>Object Programming using C++</b>
CO1	Be able to apply object oriented or non-object oriented techniques to solve bigger computing problems.
CO2	Be able to explain the difference between object oriented programming and procedural programming.
CO3	An ability to understand the basic concepts of Object Oriented Programming.
CO4	To analyse characteristics of OOP.
CO5	Be able to program using C++ features such as Class, objects, operator overloads, dynamic memory allocation etc.
	<b>Software Engineering</b>
CO1	The Objective of Software Engineering is to help developers obtain high quality software.
CO2	Improvement in design languages and reusable code.
CO3	Understand the concepts of software system and system implementation.
	<b>Applied Algebra ,Numerical Techniques, Operations Research ,Computational Geometry</b>
CO1	The objective of this course is to study the applied Mathematics
CO2	The objective of this course is to study the applied Mathematics
CO3	The objective of this course is to study the applied Mathematics
CO4	The objective of this course is to study the applied Mathematics
	<b>Digital System Hardware</b>
CO1	Consolidation of the design methodologies for combinational and sequential digital systems.
CO2	Understand fundamentals of multicore technology.
CO3	To understand fundamentals of multicore technology.
CO4	To use K-maps for digital circuit design
CO5	Use of hardware description languages for system modelling and simulation.
	<b>Analog Systems</b>
CO1	To understand the basics of analog electronics.
CO2	To study the different types of sensors
CO3	To learn the data conversion techniques.
	<b>Architecture, Interfacing &amp; Programming</b>
CO1	To understand the basics of 8051 microcontroller.
CO2	To study the programming and interfacing techniques of 8051.
CO3	To understand the basic concepts of advanced microcontroller.

	<b>Communication Principles</b>
CO1	To understand basics of communication systems.
CO2	To understand modulation, demodulation and multiplexing of signals.
CO3	To understand digital communication techniques
CO4	To introduce concepts in advanced wireless communication.
	<b>Practical Course</b>
CO1	To use basic concepts for building various applications in electronics.
CO2	To understand design procedures of different electronic circuits as per requirement
CO3	To develop skills of analysing test results of given experiments.
	<b>Systems Programming</b>
CO1	To understand the design structure of a simple editor.
CO2	To understand the design structure of Assembler and macro processor for an hypothetical simulated computer
CO3	To understand Complexity of Operating system as a software.
	<b>Operating Systems</b>
CO1	To understand design issues related to process management and various related algorithms
CO2	To understand design issues related to memory management and various related algorithms
CO3	To understand design issues related to File management and various related algorithms
	<b>Theoretical Computer Science</b>
CO1	To have an understanding of finite state and pushdown automata.
CO2	To know the relation between regular language, context free language and corresponding recognizers.
CO3	To study the Turing machine and classes of problems
	<b>Compiler Construction</b>
CO1	To understand design issues of a lexical analyser and use of Lex tool.
CO2	To understand design issues of a parser and use of Yacc tool.
CO3	To understand issues related to memory allocation.
CO4	To understand and design code generation schemes.
	<b>Computer Networks -I</b>
CO1	Understand different types of networks, various topologies and application of networks.
CO2	Understand types of addresses, data communication.
CO3	Understand the concept of networking models, protocols, functionality of each layer.
CO4	Learn basic networking hardware and tools.
	<b>Computer Networks -II</b>
CO1	Basic networking concepts
CO2	Understand wired and wireless networks, its types, functionality of layer.
CO3	Understand importance of network security and cryptography.
	<b>Internet Programming I</b>
CO1	Learn Core-PHP, Server Side Scripting Language
CO2	Learn PHP-Database handling.
	<b>Internet Programming II</b>
CO1	Learn different technologies used at client Side Scripting Language
CO2	Learn different technologies used at client Side Scripting Language
CO3	One PHP framework for effective design of web application.
	<b>Programming in Java-I</b>
CO1	To learn Object Oriented Programming language
CO2	To handle abnormal termination of a program using exception handling
CO3	To create flat files
	<b>Programming in Java-II</b>
CO1	To learn database programming using Java
CO2	To study web development concept using Servlet and JSP

CO3	To develop a game application using multithreading
CO4	To learn socket programming concept
	<b>Object Oriented Software Engineering</b>
CO1	Understanding importance of Object Orientation in Software engineering
CO2	Understand the components of Unified Modelling Language
CO3	Understand techniques and diagrams related to structural modelling.
CO4	Understand techniques and diagrams related to behavioural modelling.
	<b>Computer Graphics</b>
CO1	To study how graphics objects are represented in Computer
CO2	To study how graphics system in a computer supports presentation of graphics information
CO3	To study how interaction is handled in a graphics system
CO4	To study how to manipulate graphics object by applying different transformations
CO5	To provide the programmer's perspective of working of computer graphics
	<b>System Programming &amp; Operating System</b>
CO1	Design and implement System programs with minimal features to understand their complexity
CO2	Design and implement simulations of operating system level procedures
	<b>Lab Course II – Programming in Java</b>
CO1	Implement core Java programs to solve simple problems
CO2	Implement Client and Server end Java programs
	<b>Lab Course III – Programming in PHP &amp; Project</b>
CO1	Implement Simple PHP programs to solve simple problems