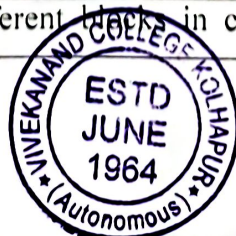


Vivekanand College, Kolhapur
B. Sc. Computer science (Entire) Part – II
CBCS Syllabus with effect from June, 2019
Course Outcome (Cos) B.Sc. (Entire Computer Science)-2019-20

	B.Sc. Part II (Entire Computer Science) Introduced in the year 2019-20
	Semester III
B.Sc.-II SEM-III	Course Name: Linear algebra & Numerical methods Subject Code: GEC – 1300C
CO No.	On Completion of the course, student will be able :
CO 1	To make use of computational techniques & algebraic skills essential for the study of systems of linear equations, matrix algebra , vector spaces, eigenvalues & eigenvectors, orthogonality & diagonalization.
CO 2	To make use of visualization, spatial reasoning, as well as geometric properties & strategies to model, solve problems & view solutions especially in R^2 & R^3 as well as conceptually extend these results to higher dimensions.
CO 3	To critically analyze & construct mathematical arguments that relate to the study of introductory linear algebra, explain methods of numerical integration, numerical solutions of ordinary differential equations. Illustrate numerical solutions of non – linear equations.
CO4	To apply numerical analysis which has enormous application in the field of science and some fields of engineering. Demonstrate the finite precision computation
B.Sc.-II SEM-III	Course Name: Computer Instrumentation And Organization, Processor Subject Code: GEC-1301 C
CO No.	On Completion of the course, student will be able :
CO 1	To explain principle of operation for various sensors. Describe functional blocks of different types of Digital instruments and data acquisition system.
CO 2	To select appropriate instrument for the measurement of electrical parameter professionally. Design Digital to Analog Converters (DAC) and Analog to Digital Converters (ADC).
CO 3	To understand the basic structure of computer organization
CO4	To use instructions for different addressing modes and construct an assembly language programs for given task using assembler
B.Sc.-II SEM-III	Course name - Introduction to RDBMS using MySQL and Object Oriented Programming Using C++




Subject Code- CC-CS-1304C	
CO No.	On Completion of the course, student will be able :
CO 1	To draw DFD, ERD, create relational database using normalization and to understand MySQL basics, classify DDL, DML, DCL commands and data constraints, implement SQL operators and functions, build C++ program structure, memory management operators, this pointer and reference variable, default argument, function overloading and explain Object Oriented Programming Concepts.
CO 2	To implement programs in C++ using control structures, inline function, explain class, access modifiers and define member functions of a class. static data members and member function, develop the programs using array of object, friend function and friend class.
CO 3	To define a constructor, destructor and explain features of constructor, destructor and types of constructor, explain rules for operator overloading and implement programs using unary and binary operator overloading.
CO 4	To explain inheritance and define Base class and derived class and implement programs using types of inheritance, define polymorphism and explain types of polymorphism and implement programs using virtual function and explain concept of pure virtual function and abstract class.
B.Sc.-II SEM-III	Course name - Skill Enhancement course-I Web technology
CO1	To understand basic concepts in HTML.
CO2	To insert and format text.
CO3	To implement a variety of hyperlinks to connect pages.
CO4	To develop a basic website.
Semester IV	
B.Sc.-II SEM-IV	Course Name: Computational Geometry & Operations research Subject Code: GEC – 1300D
CO No.	On Completion of the course, student will be able to:
CO 1	To demonstrate knowledge of key notions & principles related to computational geometry. Experiment with the central problems in the area & the various approaches to tackling.
CO 2	To identify familiarity with some of the basic algorithmic techniques of the area. Elaborate acquaintance with modern research in the field. To develop operational research from the verbal description of the real world system.
CO 3	To formulate and solve the mathematical models (linear programming problems) for physical situations like production, distribution of goods and economics.
CO 4	To solve the problems of transporting of products from origin to destinations with least transportation cost. Identify the resources required for projects and generate plan and work schedule.
B.Sc.-II SEM-IV	Course Name: Communication Principles AND 8051 Microcontroller Interfacing, Programming Subject Code : Electronics GEC-1301 D
CO No.	On Completion of the course, student will be able :
CO 1	To understand different types of noise in communication system and how noise



	affects communication using different parameters. Distinguish between different modulations schemes with their advantages, disadvantages and applications.
CO 2	To differentiate between different pulse modulation and demodulation techniques. Know the different multiple access schemes.
CO 3	To compare personal area network (PAN) technologies such as RFID Zigbee, Bluetooth and Wi-Fi. To draw and describe architecture of 8051 microcontroller. Understand the facilities of 8051 microcontroller.
CO4	To understand interfacing various peripheral devices to the microcontrollers. Write assembly language program for microcontrollers. Design microcontroller based system for various applications.

B.Sc.-II SEM-IV	Course Name: Introduction to Data Structure Using C++ and Cyber Security Theory Subject Code : CC-CS-1304D
CO No.	On Completion of the course, student will be able :
CO 1	To define Data Type, Data structure, Data object and explain Abstract Data Type, Linear and nonlinear data structures, explain Algorithm efficiency, array, types of array and sparse matrices,
CO 2	To define Stack and demonstrate operations and static implementation of stack, explain applications of stack. To define queue and demonstrate operations and static implementation of queue and explain types of queues, explain Linked list and types of linked list.
CO 3	To implement Stack and Queue using Linked list, define Tree and explain tree terminologies and tree traversal. To implement programs using searching and sorting techniques.
CO4	To explain working of computer network and importance of cyber security, understand different security threats and information security management, explain access control methods and wireless network security, understand cyber security laws and importance of security audit
B.Sc.-II SEM-IV	Course name - Skill Enhancement course-II Python Programming
CO1	To learn how to install Python, start the Python shell and to define the structure and components of a Python program.
CO2	To learn to perform basic calculations, print text on the screen and perform simple control flow operations using if statements and for loops
CO3	To learn how to use lists, tuples, and dictionaries in Python programs.
CO4	To learn how to reuse code with functions




HEAD
 DEPARTMENT OF B.SC. COMPUTER SCIENCE
 (ENTIRE)
 VIVEKANAND COLLEGE, KOLHAPUR
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