

"Education for knowledge, science and culture" - Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

B. Sc. Part – III (Computer science Entire)

CBCS Syllabus with effect from June, 2023

B. Sc. (Computer Science Entire) – III C B C S PATTERN (2023-24)

Semester: V

Course Title: Core Java and operating system

DSE-1305E

After completion of this course students will be able to:

CO1	Understand structure of java program,jvm,type conversion. Explain and implements programs in java using control statements, method overloading,constructors,array of objects, keywords this and static,
CO2	Write program on inheritance, package, abstract class and interfaces. Implement multithreading in object oriented programs. Understand concept of checked and unchecked exception and write exception handling programs.
CO3	To tell what is an operating system, its objectives and functions, types of operating system, operating system services.
CO4	To explain protection, system calls, understand the concept of process management, memory management and file management and deadlocks.

Course Title: Data Communication and Software Engineering with UML

(D SE -1306E)

After completion of this course students will be able to:

CO1	To understand the fundamental concept and components of Data Communication system, explain Concept of network, advantages and disadvantages and architectures of network, types of transmission media and types of transmission modes, to understand multiplexing and switching techniques, explain protocols and elements of protocol and standards.
CO2	Understand functions of physical layer, digital to analog conversion methods, analog to digital conversion methods, Data link layer design issues, Framing, Error detection, Error correction and flow control.
CO3	To understand the basics of software and software engineering by learning system's development life cycle, understanding traditional models and agile methodology, learn different fact finding techniques.
CO4	To understand the importance of SRS in s/w development, study use of Unified modeling language, to learn how to draw UML diagram and select suitable UML diagram for a software system, understand the basics of software testing.

Course Title: C# Programming and E-Commerce

(DSE-1307E)

After completion of this course students will be able to:

CO1	Understand .net framework architecture, Assembly, Namespace, garbage collector and JIT compilers, data types, operators, conditional, unconditional & looping
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	statements, how to write function & procedures, class, object, & OOP concepts
CO2	Understand different controls in window application, events & properties of controls, the process of Electronic commerce and Business strategy involved in it and security concerns while doing online businesses.
CO3	Appreciate ethical implications of professional practice, aware of global perspectives.
CO4	Analyze features of existing e-commerce businesses, and propose future directions or innovations for specific businesses

**Skill Enhancement Course-I
PHP Programming**

After completion of this course students will be able to:

CO1	Get the basic knowledge of PHP programming
CO2	To implement functions, strings, arrays and objects
CO3	Get the basic knowledge of databases using for web programming
CO4	To earn skill set to develop online information system using the open source PHP

**Semester - VI
Advanced Java and Data warehousing and mining
DSE-1305F**

After completion of this course students will be able to:

CO1	Create a full set of UI Widgets using Swings, dynamic web pages using Servlets and JSP
CO2	Learn to access database through Java programs, using Java Data Base Connectivity (JDBC).
CO3	Understanding Data warehousing architecture and Evaluate OLAP and use data to solve problems, make decisions, also characterize and determine data mining functionalities.
CO4	Understand and explain concept of data mining, Process of knowledge discovery in databases (KDD), Data Preprocessing and Data Quality, concept of Classification

**Computer Networks and C# and introduction to ASP.Net
DSE-1306F**

After completion of this course students will be able to:

CO1	Understand Flow control protocols-Sliding window protocol, One bit sliding window protocol, protocol using go back N, Protocol using selective repeat, explain design issues, concept of routing, routing algorithms and Congestion Control algorithms. Explain transport layer service primitives, TCP, UDP protocol,
CO2	Understand session layer services, Remote Procedure Call (RPC), explain Presentation layer services, Concept of cryptography and types of cryptography, explain Functions of application layer, application layer protocols (DNS, HTTP, SMTP, Telnet and FTP)
CO3	Get knowledge different types of errors, structured and unstructured Exception, understand how to trace errors, database connection, connected and disconnected architecture.
CO4	Understand data binding to controls, data validations, generate Reports from database using crystal report, get basic introduction to ASP.net, understand different ASP.net controls and understand concepts of Master Page



**Linux OS and Artificial intelligence and Expert system
DSE-1307F**

Course Outcome:

After learning the course the students should be able to:

CO1	To understand the linux basics- shell, kernel, general purpose utilities, directory handling commands, file handling commands, implement basic filters, understand environment variables,
CO2	Use VI editor and its different commands, write shell scripts and run them, write shell scripts using different conditional and looping statements.
CO3	To understand the basics of Artificial Intelligence, Goals of A.I. , Branches of A.I., Applications of A.I., Types of A.I., to explain Intelligence in A.I. with its components, to learn Agents and environment with case study of self driving car.
CO4	To understand Problem Solving in A.I. , and learn Search algorithms- informed, uninformed, to explain BFS , DFS and overview of expert system.

**Semester: VI Skill Enhancement course-II
SEC-IV Android Programming**

After learning the course the students should be able to:

CO1	To understand the Event driven & sequence driven programming, to explain .net framework architecture, understand assembly, namespace, garbage collector & JIT Compilers
CO2	Understand data types, operators, conditional, unconditional & looping statements. To understand how to write function & procedures
CO3	Understand class, object, & OOP concepts
CO4	Understand different controls in window application, events & properties of controls.



Pooja
CHAIRMAN
BoS B.SC.COMPUTER SCIENCE (ENTIRE)
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)