

Vivekanand College, Kolhapur (Autonomous)
B. Sc. Computer science (Entire) Part – III
CBCS Syllabus with effect from June, 2020
Course Outcome (COs) B.Sc. (Entire Computer Science)-2020-21

	Introduced in the year 2020-21
	Semester V
B. Sc. Part – III (Computer science Entire) SEM-V	Core Java and Operating system DSE-1305E
CO No.	On Completion of the course, student will be able :
CO 1	To 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.
CO 2	To 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.
CO 3	To tell what is an operating system, its objectives and functions. To classify types of operating system and explain operating system services.
CO 4	To explain protection, system calls, system programs and application programs. To understand the concept of process management, memory management and file management and deadlocks
B. Sc. Part – III (Computer science Entire) SEM-V	Data Communication and Software Engineering with UML DSE-1306E
CO No.	On Completion of the course, student will be able :
CO 1	To understand the fundamental concept and components of Data Communication system. To explain Concept of network, advantages and disadvantages, categories and architectures of network. To explain types of transmission media and types of



	network. To explain types of transmission media and types of transmission modes. Understand multiplexing and switching techniques. Explain network devices, protocols and elements of protocol and standards.
CO 2	To understand functions of physical layer, digital to analog conversion methods, analog to digital conversion methods. Understand Data link layer design issues, Framing, Error detection, and Error correction and flow control. To understand the basics of software and software engineering. To learn what is system's development life cycle
CO 3	To learn and understand what are traditional and latest process models, learn and know what agile development is. To learn different fact finding techniques, which serve as a basis for requirements analysis and gathering, understand the importance of SRS in s/w development.
CO 4	To study use of Unified modelling language. To learn how to draw UML diagram. To understand and learn to select suitable UML diagram for our software system. To understand the basics of software testing
B. Sc. Part – III (Computer science Entire) SEM-V	
	VB.net and E-commerce DSE-1307E
CO No.	On Completion of the course, student will be able :
CO 1	To understand the Event driven & sequence driven programming, to explain .net framework architecture, understand assembly, namespace, garbage collector & JIT Compilers
CO 2	To understand data types, operators, conditional, unconditional & looping statements. To understand how to write function & procedures Understand class, object, & OOP concepts.
CO 3	To 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.
CO 4	To appreciate ethical implications of professional practice. Be aware of global perspectives. Analyze features of existing e-




	commerce businesses, and propose future directions or innovations for specific businesses
SEM-VI	
B. Sc. Part – III (Computer science Entire) SEM-VI	Computer Science DSE-1305F Advanced Java and Data warehousing and mining Theory:
CO No.	On Completion of the course, student will be able :
CO 1	To create a full set of UI Widgets using Abstract Windowing Toolkit (AWT) & Swings. Learn to access database through Java programs, using Java Data Base Connectivity (JDBC). Create dynamic web pages using Servlets
CO 2	To create dynamic web pages using JSP. To understand Data Warehousing, Working of data warehouse, Data Warehouse applications. To understand types of data Warehouse, Difference between Data Warehouse (OLAP) and Operational Database (OLTP).
CO 3	To understand and explain concept of data mining, Process of knowledge discovery in databases (KDD). To Explain Data Objects and Attribute Types. To Understand Data Preprocessing and Data Quality. To Understand Data Preprocessing and Data Quality
CO 4	To explain major tasks in Data Preprocessing. To understand market basket analysis and explain Apriori algorithm. To understand concept of Classification. To understand regression analysis, Concept of clustering and explain K-means Clustering algorithm
B. Sc. Part – III (Computer science Entire) SEM-VI	
	Computer Networks and C# and introduction to ASP.Net DSE-1306F
CO No.	On Completion of the course, student will be able :
CO 1	To 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.



CO 2	To explain transport layer service primitives, TCP, UDP protocol. Understand session layer services, Remote Procedure Call(RPC), Presentation layer services, Concept of cryptography and types of cryptography. To explain Functions of application layer, application layer protocols (DNS, HTTP, SMTP, Telnet and FTP) and network security.
CO 3	To explain Functions of application layer, application layer protocols (DNS, HTTP, SMTP, Telnet and FTP) and network security. To get knowledge different types of errors, structured & unstructured exception, to understand how to trace errors.
CO 4	To understand database connection, connected & disconnected architecture, data binding to controls, data validations. Understand & Generate Reports from database using crystal report. Get Basic introduction to ASP.net, understand different ASP.net controls, understand concepts of Master Page
B. Sc. Part – III (Computer science Entire) SEM-VI	Linux OS and Artificial intelligence and Expert system DSE-1307F
CO No.	On Completion of the course, student will be able :
CO 1	To understand the linux basics- shell, kernel, general purpose utilities, directory handling commands, file handling commands
CO 2	To implement basic filters, understand environment variables.
CO 3	To use VI editor and its different commands. To write shell scripts and run them
CO 4	To write shell scripts using different conditional and looping statements.




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B. Sc. Part – III (Computer science Entire) SEM-V	Skill Enhancement Course-I PHP Programming
CO No.	On Completion of the course, student will be able :
CO 1	Get the basic knowledge of PHP programming
CO 2	To implement functions, strings, arrays and objects
CO 3	Get the basic knowledge of databases using for web programming.
CO 4	To earns skill set to develop online information system using the open source PHP.
B. Sc. Part – III (Computer science Entire) SEM-VI	Skill Enhancement course-II Android Programming
CO No.	On Completion of the course, student will be able :
CO 1	To understand the Event driven & sequence driven programming, to explain .net framework architecture, understand assembly, namespace, garbage collector & JIT Compilers
CO 2	Understand data types, operators, conditional, unconditional & looping statements. To understand how to write function & procedures
CO 3	Understand class, object, & OOP concepts
CO 4	Understand different controls in window application, events & properties of controls.

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