

**Shikshan Prasarak Mandal's**  
**Gopal Krishna Gokhale College, Kolhapur**  
**Course Outcomes**  
**Department of Computer Science**

<b>Class</b>	<b>Semester</b>	<b>Paper Name &amp; Number</b>	<b>Outcomes</b>
<b>B.Sc.I CBCS</b>	<b>Sem.-I</b>	<b>DSC-11 A - Problem Solving Using Computers</b>	<ul style="list-style-type: none"> <li>1. Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.</li> <li>2. Demonstrate an understanding of computer programming language concepts.</li> <li>3. To be able to develop C programs on linux platform.</li> <li>4. Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array.</li> </ul>
		<b>DSC-12A Database Management System</b>	<ul style="list-style-type: none"> <li>1. Understand the basic concepts and the applications of database systems.</li> <li>2. Master the basics of SQL and construct queries using SQL.</li> <li>3. Understand the relational database design principles.</li> <li>4. Familiar with the basic issues of transaction processing and concurrency control.</li> <li>5. Familiar with database storage structures and access techniques.</li> <li>6. Design ER-models to represent simple database application scenarios</li> </ul>
	<b>Sem.-II</b>	<b>DSC-11B Programming Skills Using 'C'.</b>	<ul style="list-style-type: none"> <li>1. Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.</li> <li>2. Student must be able to define union and enumeration user defined data types.</li> <li>3. Develop confidence for self education and ability for life-long learning needed for Computer language..</li> </ul>
		<b>DSC-12B</b>	<ul style="list-style-type: none"> <li>1. Understand the E R model and relational model</li> </ul>

		<b>Relational Database Management System</b>	<ol style="list-style-type: none"> <li>2. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.</li> <li>3. Understand Functional Dependency and Functional Decomposition.</li> <li>4. Apply various Normalization techniques</li> <li>5. Perform PL/SQL programming using concept of Cursor Management, Error Handling, Package and Triggers</li> <li>6. Execute various advance SQL queries related to Transaction Processing &amp; Locking using concept of Concurrency control.</li> </ol>
<b>B.Sc. II CBCS</b>	<b>Sem.-III</b>	<b>DSC-11C PHP and MySQL</b>	<ol style="list-style-type: none"> <li>1. The objective of this course is to provide the necessary knowledge to design and develop dynamic, database-driven web applications using PHP version 5.</li> <li>2. Students will learn how to connect to any ODBC-compliant database, and perform hands on practice with a MySQL database to create database-driven HTML forms and reports etc.</li> <li>3. Students also learn how to configure PHP and Apache Web Server. Comprehensive lab exercises provide facilitated hands on practice crucial to develop competence web sites.</li> </ol>
		<b>DSC-12C Object Oriented Programming Using C++</b>	<ol style="list-style-type: none"> <li>1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.</li> <li>2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc</li> <li>3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.</li> <li>4. Demonstrate the use of various OOPs concepts with the help of programs.</li> </ol>
	<b>Sem.-IV</b>	<b>DSC-11D Cyber Security Essentials-I</b>	<ol style="list-style-type: none"> <li>1. Exhibit knowledge to secure corrupted systems, protect personal data, and secure computer networks in an Organization.</li> <li>2. Develop cyber security strategies and policies.</li> <li>3. Understand principles of web security and to guarantee a secure network by monitoring and analyzing the nature of attacks through cyber/computer forensics software/tools.</li> </ol>

		<b>DSC-12D Data Structure Using C++</b>	<ul style="list-style-type: none"> <li>1.To impart the basic concepts of data structures and algorithms</li> <li>2 .To understand concepts about searching and sorting techniques</li> <li>3. To Understand basic concepts about stacks,queues,lists,trees and graphs</li> <li>4 .To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures</li> </ul>
<b>B.Sc. III CBCS</b>	<b>Sem.-V</b>	<b>DSE-21E - Core Java Paper No. IX</b>	<ul style="list-style-type: none"> <li>1. Explain about basic Java language syntax and semantics to write Java programs.</li> <li>2. Describe the concepts of variables, conditional and iterative execution methods etc.</li> <li>3. Discuss the fundamentals of object-oriented programming in Java, including defining classes, objects, invoking methods</li> <li>4. Explain the various methodologies to handle the exception mechanisms and the principles of inheritance, packages and interfaces</li> <li>5. Demonstrate the programming concepts for applet and graphics.</li> </ul>
		<b>DSE-22E – C# Programming Paper No. X</b>	<ul style="list-style-type: none"> <li>1. Create, compile and run object-oriented C# programs using Visual Studio.</li> <li>2. Explain the C# language constructs syntax and semantics.</li> <li>3. Describe the reusable .NET components via interface realization and standard design patterns.</li> <li>4. Discuss about the major namespaces and classes of the .NET Framework.</li> <li>5. Explain the databases using Language Integrated.</li> </ul>
		<b>DSE-23E – Linux Part I Paper No. XI</b>	<ul style="list-style-type: none"> <li>1. Explain the history and origins of the Linux operating system</li> <li>2. Text editing in the Linux environment</li> <li>3. Implement basic Linux tools</li> <li>4. Configure the Linux environment</li> <li>5. understanding the basic set of commands and utilities in Linux/UNIX systems.</li> <li>6. To learn the scripting language and get experience of shell programming</li> <li>7. To learn the important Linux/UNIX library functions and system calls.</li> </ul>
		<b>DSE-24E Paper XII</b>	<ul style="list-style-type: none"> <li>1. To understand why Python is a useful scripting language for developers</li> <li>2.To learn how to write loops and decision statements in Python</li> </ul>

		<b>Python Part I</b>	3. To learn how to use lists, tuples, and dictionaries in Python programs
<b>Sem.-VI</b>		<b>DSE-21F- Advanced Java Paper No. XIII</b>	<ol style="list-style-type: none"> <li>1. Explain about Advanced Java language syntax and semantics to write Advanced Java programs.</li> <li>2. Advanced Java describes the concepts of variables, conditional and iterative execution methods in advanced technics.</li> <li>3. Demonstrate approaches for performance and effective coding</li> <li>4. The student will be able to develop distributed business applications, develop web pages using advanced server-side programming through servlets and Java server pages.</li> <li>5. To study web development concept using Servlet and JSP</li> <li>6. To learn database programming using Java</li> </ol>
		<b>DSE-22F – ASP .NET Paper No. XIV</b>	<ol style="list-style-type: none"> <li>1. This course will cover the practical aspects of multi-tier web based application development using the .NET framework.</li> <li>2. The goal of this course is to introduce the students to the basics of distributed Web application development.</li> <li>3. Explain the fundamental tags used in HTML.</li> <li>4. Develop the web page in various applications.</li> <li>5. Describe the concepts of database handling using DAO, ADO and RDO control with data report concepts.</li> <li>6. Discuss about the fundamental functions and properties of Advanced ActiveX Control.</li> <li>7. Describe the functionality and properties of GUI based ActiveX Control with example programs</li> <li>8. Explain the basic Concepts of Program building block control statements and the basic concepts of function and procedure.</li> </ol>
		<b>DSE-23F – Linux Part II Paper No. XV</b>	<ol style="list-style-type: none"> <li>1. Understand the theory of Linux design and operation</li> <li>2. Ability to be productive in a Linux environment</li> <li>3. To learn to develop software for Linux/UNIX systems.</li> <li>4. To understand the inner workings of UNIX-like operating systems.</li> <li>5. To obtain a foundation for an advanced course in operating systems.</li> <li>6. Discuss shell programming in Linux operating system</li> <li>7. Distinguish various filter and server commands</li> <li>8. Recognize the technological trends of Computer Networking.</li> </ol>

			<p>9. Understand the TCP/IP model. 10. Evaluate the challenges in building networks and solutions to those.</p>
	<p><b>DSE-24F</b> <b>Paper XVI</b> <b>Python Part II</b></p>		<p>1. To learn how to write functions and pass arguments in Python 2. To learn how to build and package Python modules for reusability 3. To learn how to use exception handling in Python applications for error handling</p>