SHRI SHIV-SHAHU MAHAVIDYALAYA, SARUD

Tal. Shahuwadi Dist. Kolhapur

Course Outcomes ,Programme Outcomes and Programme Specific Outcomes

DEPARTMENT OF COMPUTER SCIENCE

Course Outcomes:-

They are the resultant knowledge skill the student acquires at the end of a course. It define the cognitive process of a course provides.

B.Sc. Part- I (Computer Science)   Semester - I

DSC-11A : Problem Solving using Computers (Paper I)

1) Understand the concept of problem solving, Problem definition, Program design,Debugging.

2) Introduces the Linux operating system and GCC Compiler, Built-In Standard Library, Nitty-Gritty of Programming.

3) TO understand the concept of C Program Structure, Vi Editor, Whittling the First 'C' Program

4) To develop the 'C' program using Structure, Vi Editor,Whittling the First 'C' Program

5) To develop the first 'C

DSC-12A: Database Management System (Paper II)

1) To understand the concept of database and its characteristics.

2) To understand the concept of Data models like Hierarchical, Network, Relational, Schema and Instances.

3) To understand the diagram of DBMS architecture related to three schema , data independence.

4) To understand the concept of entity, domain, attributes and tuples.

5) To understand the concept of Entity Relationships : 1:1, 1:M, M:1, M:M.

6) To understand the concept of SQL-99: Schema Definition, Constraints: Domain Integrity, Entity ,Referential.

7) To understand concept of Object modeling.

B.Sc. Part- I (Computer Science)   Semester - II

DSC- 11B : Programming Skills Using 'C' (Paper III)

1) Develop 'C' program using Pointer.

2) Develop 'C' program using Functional Functions.

3) Develop 'C' Program using Structure and Dynamic Memory Allocation.

4) Understand the concept of file handing.

5) Develop 'C' Program using file handling different functions.

DSC-12B :Relational Database Management Systems (Paper IV)

1) To understand basic concept of relational constraints and relational algebra.

2) TO understand structure query language(SQL)

3) Use various commands of DDM,DML and DCL on computer.

4) Use SQL operators with different options in DDL, DML and DCL.

5) Use SQL clauses like Where, Order by, Group by , Having.

6) Use of Aggregate Functions in SQL.

B.Sc. Part- II (Computer Science)   Semester - III

DSC-11C : PHP and MySQL (Paper V)

1) To understand basic concept of PHP.

2) To Learn how to developing applications in PHP using MySQL.

3) To learn and develop various PHP technology applications that definitely meets the current industry needs.

DSC-12C : Object Oriented Programming Using C++ (Paper VI)

Perform object oriented programming to develop solutions to problems demonstrating usage of control structures, modularity, I/O and other standard language constructs.

1) To understand how C++ improves C with object oriented features

2) To learn syntax and semantics of C++ programming language

3) To learn how to write inline functions for efficiency and performance.

4) To learn how to overload functions and operators in C++.

5) To learn how to design C++ classes for code reuse.

6) To learn how inheritance promote code reuse in C++.

7) To learn how inheritance and virtual functions implement dynamic binding with polymorphism.

B.Sc. Part- II (Computer Science) Semester - IV

DSC-11D :Cyber Security Essentials-I (Paper VII)

1) Understand concept of information security management.

2) Learn different access controls methods.

3) Understand wireless network security.

4) Learn cyber security laws and importance of security audit.

DSC-12D : Data Structure Using C++ (Paper VIII)

1) Understand the basic concepts such as Abstract Data Types, Linear and Non Linear Data structures.

2) Ability to choose appropriate data structures to represent data items in real world problems.

3) Ability to analyze the time and space complexities of algorithms.

4) Ability to design programs using a variety of data structures such as array, stacks, queues, linked list.

5) Able to analyze and implement various kinds of searching and sorting techniques

B.Sc. Part- III (Computer Science)   Semester - V

DSE-21E : Core Java (Paper IX)

1) Object oriented programming concepts using Java.

2) Knowledge of input, its processing and getting suitable output.

3) Understand, design, implement and evaluate classes and applets

4) Understand concept of Multiprogramming and Exception Handling.

DSE-22E : C# Programming (Paper X)

1) To introduce .NET Technology to the students

2) This course will cover the practical aspects C#.NET framework.

3) The basics of OOPs and windows application program.

4) To understand and develop applications using ASP.NET programming techniques.

DSE-23E : LINUX Part I (Paper XI)

1) TO Understand Concept of Multiuse OS

2) Allowing them to easily use any Linux distribution.

3) Interact with Linux for Handling File and directories

4) This course shall help student to learn advanced subjects in computer science practically.

DSE-24E : Python Part I(Paper XII)

1) To understand why Python is a useful scripting language for developers

2) To learn how to write loops and decision statements in Python

3) To learn how to use lists, tuples, and dictionaries in Python programs

B.Sc. Part- III (Computer Science)   Semester - VI

DSE-21F : Advanced Java (Paper XIII)

The student will be able to develop distributed business applications, develop web pages

1) Using advanced server-side programming through servlets and Java server pages.

2) Demonstrate approaches for performance and effective coding

3) To learn database programming using Java

4) To study web development concept using Servlet and JSP

DSE-22F : ASP .NET (Paper XIV)

1) This course will cover the practical aspects of multi-tier web based application development using the .NET framework.

2) The goal of this course is to introduce the students to the basics of distributed Web application development.

DSE-23F : Linux Part II (Paper XV)

1) This course covers design principles of Linux Operating System Memory management.

2) Structure of File system and virtual file system is also elaborated.

3) This course contains details of shell programming and introduces System administration

DSE-24F : Python Part II (Paper XVI)

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

Programme Outcomes

It represents the knowledge, skill, and attribute the student should have at the end of a three year program in India.

1) **Science Knowledge:** Apply knowledge of mathematics and science, with fundamentals of Computer Science to be able to solve complex software engineering problems related to CSE.

2) **Problem Analysis:** Identify, Formulate, review research literature and analyze complex software engineering problems related to CSE and reaching substantiated conclusions using first principles of mathematics, natural sciences and computer sciences.

3) **Design/Development of solutions:** Design solutions for complex software engineering problems related to CSE and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural societal and environmental considerations.

4) **Conduct Investigations of Complex problems:** Use research–based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5) **Modern Tool Usage:** Create, Select and apply appropriate techniques, resources and modern software engineering and IT tools including prediction and modeling to computer science related complex software engineering activities with an understanding of the limitations.

6) **The Computer Science and Society:** Apply Reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional software practice

7) **Environment and Sustainability:** Understand the impact of the software professional solutions in social and environmental contexts and demonstrate the knowledge of, and need for sustainable development

8) **Ethics:** Apply Ethical Principles and commit to professional ethics and responsibilities and norms of the software professionals practice.

9) **Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary Settings

10) **Communication:** Communicate effectively on complex software professional activities with the software engineering community and with society at large such as able to

comprehend and with write effective reports and design documentation, make effective presentations and give and receive clear instructions.

11) **Project Management and Finance:** Demonstrate knowledge and understanding of the software management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi disciplinary environments

12) **Life-Long Learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning the broadest context of technological change.

Program Specific Outcomes

1) **Foundation of mathematical concepts:** To use mathematical methodologies to crack problem using suitable mathematical analysis, data structure and suitable algorithm.

2) **Foundation of Computer System**: The ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.

3)**Foundations of Software development**: The ability to grasp the software development lifecycle and methodologies of software systems. Possess competent skills and knowledge of software design process. Familiarity and practical proficiency with a broad area of programming concepts and provide new ideas and innovations towards research