Rayat Shikshan Sanstha's

DAHIWADI COLLEGE DAHIWADI

Department of Computer Science

Programme Outcomes (POs)

Upon completion of the BSc Computer Science programme, students will be able to:

PO1	Analyze and compare alternative solutions to computing problems
PO2	Design and implement software systems that meet specified design and performance requirements
PO3	Recognize the need for and an ability to engage in continuing professional development.
PO4	Work and communicate effectively in interdisciplinary environment, either independently or in team, and demonstrate scientific leadership in academia and industry.
PO5	Communicate effectively by oral, written, computing and graphical means.

Programme Specific Outcomes (PSOs)

Students will be able to attain the following program specific outcomes:-

PSO1	Develop competence in basic technical subjects in computer applications like Programming Languages, Data Structures, Databases, Operating Systems, Software Engineering.
PSO2	Identify, analyze, formulate and develop computer applications.
PSO3	Map real life scenarios to various theoretical optimal solutions.
PSO4	Provide simplest automated solutions to various legacy systems.
PSO5	An ability to effectively integrate IT-based solutions into the user environment.
PSO6	Work professionally with positive attitude as an individual or in multidisciplinary teams and communicate effectively.
PSO7	Appreciate the importance of goal setting and to recognize the need for life-long learning.

Programme Course Outcomes (COs)

BSc.cs 101 Problem Solving Using Computers part- I

On successful completion of this course, the students will be able to

CO1	Identify and define central and secondary problems.
CO2	Identify and use appropriate technology to research, solve, and present solutions to problems.
CO3	Make a decision and take actions based on analysis.
CO4	Interpret and use written, quantitative, and visual text effectively in presentation of solutions to problems.

BSc.cs 102 Database Management Systems

Upon successful completion of this course, students will be able to

CO1	To analyze Data Base design methodology
CO2	Acquire knowledge in fundamentals of Data Base Management System.
CO3	Be able to analyze the difference between traditional file system and DBMS.
CO4	Able to handle with different Data Base languages.
CO5	Draw various data models for Data Base and Write queries mathematically.

BSc.cs 103 Programming Skills Using 'C'.

Upon successful completion of this course, students will be able to

CO1	Understand the basic terminology used in computer programming
CO2	Write, compile and debug programs in C language.
CO3	Use different data types in a computer program.
CO4	Design programs involving decision structures, loops and functions.
CO5	Explain the difference between call by value and call by reference
CO6	Understand the dynamics of memory by the use of pointers and Structures.
CO7	Use different data structures and create/update basic data files.

BSc.cs 104 Relational Database Management System

Upon successful completion of this course, students will be able to

CO1	Design a relational database schema for a subject of interest to the student.
CO2	Describe the fundamental elements of relational database management systems
CO3	Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
CO4	Design ER-models to represent simple database application scenarios
CO5	Improve the database design by normalization.

BSc.cs 201 Relational Database Management System Part II

Upon successful completion of this course, students will be able to

CO1	Understand a relational table schema
CO2	Design a relational database schema for a subject of interest to the student.
CO3	Be familiar with the relational database theory, and be able to write relational algebra expressions for queries.
CO4	Mater sound design principles for logical design of databases, including the E-R method and normalization approach.
CO5	Master the basics of query evaluation techniques and and query optimization.

BSc.cs 202 Object Oriented Programming Using C++

Upon successful completion of this course, students will be able to

CO1	Apply object-oriented programming features to program design and implementation
CO2	Understand object-oriented concepts and how they are supported by C++
CO3	Understand implementation issues related to object-oriented techniques.
CO4	Demonstrate the ability to analyze, use, and create functions, classes, to overload operators.
CO5	Demonstrate the ability to understand and use inheritance and Pointers when creating or using classes and create templates

BSc.cs 203 Data structure using C++

Upon successful completion of this course, students will be able to

CO1	Develop programming skills with the understanding of the fundamentals and basics of C and C++ Languages.
CO2	Develop programming skills with the understanding of the fundamentals and basics of C and C++ Languages.
CO3	Ability to analyze algorithms and aalgorithm correctness.
CO4	Ability to summarize searching and sorting techniques
CO5	Ability to describe stack,queue and linked list operation.
CO6	Ability to have knowledge of treeand graphs concepts.

BSc.cs 204 Cyber Security Essentials

Upon successful completion of this course, students will be able to

CO1	To write a survey on cyber security concepts
CO2	To create a case study report on practice administrating using Cyber Security open source tools.
CO3	To write problem solutions for multi-core or distributed, concurrent/Parallel environments.
CO4	Assess the role of strategy and policy in determining the success of information security;

BSc.cs 301 Computer Network Part III

Upon successful completion of this course, students will be able to

CO1	Define, use and implement Computer Networks and the basic components of a Network system.
CO2	Know and Apply pieces of hardware and software to make networks more efficient, faster, more secure, easier to use, able to transmit several simultaneous messages, and able to interconnect with other networks.
CO3	Differentiate the various types of network configurations and applying them to meet the changing and challenging networking needs of organizations.
CO4	Understand the layers of OSI and TCP and get knowledge about congestion control and network security
CO5	Define the different protocols, software, and network architectures.
CO6	Define the concept of local area networks, their topologies, protocols and

	applications.
CO7	Analyze why networks need security and control, what errors might occur, and how to control network errors.

BSc.cs 302Visual Programming Using C#

Upon successful completion of this course, students will be able to

CO1	Master using basic C# constructs.
CO2	Master using C# delegates and events.
CO3	Be familiar with using .NET collections (sets, lists, dictionaries).
CO4	Be exposed to C# documentation and community web sites.
CO5	Be exposed to exceptions, Windows Forms, .NET Remoting and Serialization.

BSc.cs 303 Linux Operating System

Upon successful completion of this course, students will be able to

CO1	Work confidently in Unix/Linux environment
CO2	Write shell scripts to automate various tasks
CO3	Master the basics of linux administration
CO4	Scripts and programs will be accompanied by printed output demonstrating completion of a test plan.
CO5	Testing will demonstrate both black and glass box testing strategies.

BSc.cs 304 PHP and MySQL

Upon successful completion of this course, students will be able to

CO1	Students will learn a range of *advanced PHP and MySQL techniques* including implementing security, validating forms, fetching date from forms, storing data in database, database designing, creation, and optimization
CO2	Students will also learn Arrays, Associative Array, Two-Dimensional Array,Conditional Statements,Function and Session.
CO3	Lifetime support even after completion of the course

BSc.cs305 Network Technology and Windows Server 2008

Upon successful completion of this course, students will be able to

CO1	Identify theories of group dynamics and hone skills specific to working in and managing groups and teams
CO2	Identify the basic knowledge and practical skills needed to install and support computer operating systems
CO3	Install, configure and manage major network server types, i.e. VoIP (Voice over IP), streaming video, web, database and remote access servers
CO4	Determine the hardware and software needs for enterprise-level networks, including network setup and the costs involved for equipment, staff, and construction
CO5	Configure enterprise-level network devices such as routers, switches and

	wireless access points

BSc.cs 306 Java Programming

Upon successful completion of this course, students will be able to

CO1	Understanding of the principles and practice of object oriented analysis and design in the construction of robust, maintainable programs which satisfy their requirements;
CO2	Ability to implement, compile, test and run Java programs comprising more than one class, to address a particular software problem.
CO3	Demonstrate the principles of object oriented programming;
CO4	Demonstrate the ability to use simple data structures like arrays in a Java program.
CO5	Understand the concept of package, interface, multithreading and File handling in java.
CO6	Ability to make use of members of classes found in the Java API (such as the Math class).

BSc.cs 307 Advanced Linux Application

Upon successful completion of this course, students will be able to

CO1	Fluently navigate and work with files and directories
CO2	Prepare the environment to analyse big amount of biological data on a supercomputer
CO3	Transfer files from the local computer to the remote one and vice versa
CO4	Combine bioinformatics applications into pipelines on a supercomputer

BSc.cs 308 E-Commerce

Upon successful completion of this course, students will be able to

CO1	Define and analyze the principles of E-commerce and basics of World Wide Web.
CO2	Define and analyze the concept of electronic data interchange and its legal, social and technical aspects.
CO3	Define and analyze the security issues over the web, the available solutions and future aspects of e-commerce security.
CO4	Define and analyze the concept of E-banking, electronic payment system.