THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN (AUTONOMOUS),
SIVAKASI – 626 123.

(Affiliated to Madurai Kamaraj University, Re-accredited with A Grade by NAAC,
College with Potential for Excellence by UGC and Mentor Institution under UGC PARAMARSH)

DEPARTMENT OF INFORMATION TECHNOLOGY

B.SC DEGREE PROGRAMME IN INFORMATION TECHNOLOGY

PROGRAMME EDUCATIONAL OBJECTIVES The Graduates will	
PEO1.	design, develop and test IT based software systems in software industries /institutions and excel in higher studies
PEO2.	utilize the future technologies to provide solutions to IT based problems and sustain research activities and development in IT related fields
PEO3.	adapt to recent trends of IT by life-long learning and become self employed by developing software
PEO4.	follow the ethics, managerial skills and quality control required to maintain professionalism in the IT industries

PROGRAMME SPECIFIC OUTCOMES By the Completion of B.Sc Information Technology programme, the learners will be able to	
PSO1.	apply the acquired technical knowledge of Information Technology to solve problems in different fields of Information Technology
PSO2.	identify, design and develop software/hardware solutions to meet the needs of IT industry
PSO3.	select and apply recent techniques and tools necessary for integrating IT-based solutions into the user environment effectively
PSO4.	create visual presentations and maintain project documents as per the technical standards
PSO5.	function effectively as a team member or a leader to accomplish software development comprises of multidisciplinary team
PSO6.	follow the ethical principles involved in IT research and industrial practices
PSO7.	engage in life-long learning process by updating the knowledge of individual with the upcoming software tools and techniques

COURSE OUTCOME

Core Course	
Course Code: GLIT11	**Course Title: PROGRAMMING IN C**
On successful completion of the course, the learners should be able to	
CO1.	explain the basic building blocks and structured programming concepts in C
CO2.	discuss user defined functions, structures, unions, pointers and files
CO3.	create simple programs using decision making and looping statements
CO4.	compare the decision making statements, structures and unions
CO5.	develop simple programs using functions, arrays, string functions and file

Allied Course	
Course Code: GLIT1A	**Course Title: COMPUTER SYSTEM ARCHITECTURE**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of digital logic, number systems, gates, basic structure of computers, memory systems, processing and machine instructions
CO2.	solve problems in number systems and arithmetic circuits
CO3.	compare various types of flip-flops and registers
CO4.	classify various memory systems
CO5.	analyze the memory systems, processing unit and machine instructions

Core Course	
Course Code: GLIT1L	**Course Title: C & PC SOFTWARE LAB**
On successful completion of the course, the learners should be able to	
CO1.	build C programs using various operators, conditional and iterative statements
CO2.	experiment C programs using arrays, strings, functions and user defined data types
CO3.	create various personal/business documents using Microsoft Word
CO4.	build Excel Sheets to formulate complex calculations and do statistical analysis using Charts
CO5.	design business presentations with elegant animations

Core Course	
Course Code: GTIT21	**Course Title: OBJECT ORIENTED PROGRAMMING WITH C++**
On successful completion of the course, the learners should be able to	
CO1.	explain the OOP concepts, tokens, expressions, control structures, classes, objects, constructors, destructors, pointers and files
CO2.	create programs using functions, constructor and destructor
CO3.	analyze the functions, operator overloading and inheritance
CO4.	make use of inheritance and operator overloading
CO5.	summarize the concept of pointers, virtual functions, templates and exception handling

Allied Course	
Course Code: GLIT2A	**Course Title: MATHEMATICAL FOUNDATIONS**
On successful completion of the course, the learners should be able to	
CO1.	describe the various discrete structures in a formal mathematical manner
CO2.	apply mathematical logic to solve problems
CO3.	determine various characteristics of sets and solutions to recurrence relations
CO4.	problems using basic graph theory and combinatorics
CO5.	evaluate system of linear equation using matrices

Core Course	
Course Code: GLIT2L	**Course Title: ADVANCED C&C++ PROGRAMMING LAB**
On successful completion of the course, the learners should be able to	
CO1.	develop basic pointer concepts and file operations in C
CO2.	apply overloading, structure, constructor, friend function and inheritance concepts
CO3.	construct code to perform stack and queue operations
CO4.	implement sorting and searching techniques using C++.
CO5.	perform read and write a data in a file using C++.

Core Course	
Course Code: GLIT31	**Course Title: RDBMS**
On successful completion of the course, the learners should be able to	
CO1.	summarize the fundamental concepts of DBMS, database architecture, data models, normalization concepts and database terminologies
CO2.	demonstrate the ER model and Relational Algebra operations from mathematical set theory
CO3.	create and populate a RDBMS with constraints and keys using SQL
CO4.	use different query constructs for efficient retrieval of information from a database
CO5.	experiment PL/SQL Procedures, Functions, Package and Triggers

Core Course	
Course Code: GLIT32	**Course Title: WEB DESIGNING**
On successful completion of the course, the learners should be able to	
CO1.	explain the basic concepts of Internet, HTML elements and CSS terminologies.
CO2.	apply the fundamental HTML tags/FORM elements for designing Webpages.
CO3.	make use of multimedia components in web page creation.
CO4.	discuss the basic concepts of JavaScript
CO5.	construct the layout of multiple web pages using Cascading Style Sheet.

Allied Course	
Course Code: GLIT3A	**Course Title: RESOURCE MANAGEMENT TECHNIQUES**
On successful completion of the course, the learners should be able to	
CO1.	formulate the decision making problems into mathematical models
CO2.	explain the various methods, rules and terms in solving decision making problems.
CO3.	solve problems using Graphical method and Simplex method
CO4.	use various methods to solve Transportation and Assignment Problems
CO5.	construct networks to determine the Critical Path using PERT/CPM

Core Course	
Course Code: GLIT3L	**Course Title: RDBMS LAB**
On successful completion of the course, the learners should be able to	
CO1.	implement Basic DDL, DML and DCL commands
CO2.	retrieve information from a database by formulating complex queries in SQL
CO3.	summarize data using Aggregate and Group functions
CO4.	apply nested and join queries to combine multiple tables
CO5.	develop PL/SQLcode for procedures, triggers, cursors, exception handling

Allied Course	
Course Code: GLIT3AL	**Course Title: WEB DESIGNING LAB**
On successful completion of the course, the learners should be able to	
CO1.	design Web pages by applying the fundamental HTML tags/FORM elements
CO2.	experiment with navigational tag by creating multiple web pages.
CO3.	make use of multimedia components in web page creation.
CO4.	develop dynamic web pages using JavaScript objects by applying different event handling mechanism
CO5.	construct the layout of multiple web pages using Cascading Style Sheet

Core Course	
Course Code: GLIT41	**Course Title: OPERATING SYSTEM**
On successful completion of the course, the learners should be able to	
CO1.	explain the basic concepts of Operating system, file system, mass storage structure and algorithms
CO2.	experiment with different Process and Disk Scheduling Algorithms
CO3.	summarize Process synchronization, deadlocks and memory management strategies
CO4.	analyze the Page Replacement algorithms
CO5.	illustrate the access and allocation methods of File system

Allied Course	
Course Code: GLIT4A	**Course Title: DATA STRUCTURES**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of data structures, sorting and searching
CO2.	execute the operations of arrays and linked list
CO3.	differentiate the operations of stack and queue
CO4.	analyze the concepts of trees and graphs
CO5.	experiment the sorting and searching techniques

Core Course	
Course Code: GLIT4L	**Course Title: UNIX & SHELL PROGRAMMING LAB**
On successful completion of the course, the learners should be able to	
CO1.	demonstrate the various features of UNIX
CO2.	execute various commands in UNIX
CO3.	construct code to perform database programs using AWK
CO4.	perform the operations using Filters
CO5.	implement Shell programming

Allied Course	
Course Code: GLIT4AL	**Course Title: DATA STRUCTURES LAB**
On successful completion of the course, the learners should be able to	
CO1.	make use of various features of Data Structures
CO2.	execute the operations of Arrays and Linked List
CO3.	implement the operations of Stack and Queue
CO4.	demonstrate the basic concepts of Trees and Graphs
CO5.	construct code to perform sorting and searching using various techniques

Core Course	
Course Code: GLIT51	**Course Title: JAVA PROGRAMMING**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of object oriented, applet and graphics programming
CO2.	demonstrate the concepts behind classes and objects
CO3.	make use of decision making, branching and looping statements
CO4.	analyze the features of multithreading, inheritance, interface, packages and exceptions
CO5.	construct simple application programs and applet programs

Core Course	
Course Code: GLIT5L1	**Course Title: JAVA PROGRAMMING LAB**
On successful completion of the course, the learners should be able to	
CO1.	implement console applications
CO2.	apply inheritance, package andinterface
CO3.	examine multithreading and exception handling
CO4.	build programs using applet and GUI components
CO5.	create programs using layout managers and event handling

Core Course	
Course Code: GLIT5L2	**Course Title: WEB TECHNOLOGY LAB**
On successful completion of the course, the learners should be able to	
CO1.	make use of various common controls of VB.NET and ASP.NET
CO2.	experiment applications to perform various operations on Windows Form controls
CO3.	apply the Web based controls for designing the interface for any Web applications
CO4.	create Database applications using DataBound and DataSource Controls
CO5.	build website using master pages and CSS to give better look and feel to Web applications

Core Course	
Course Code: GLIT61	**Course Title: COMPUTER NETWORKS**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of computer networks, DNS and cryptography.
CO2.	classify the network reference models
CO3.	distinguish the various layers of OSI model
CO4.	outline the various transmission modes, the protocols of data link and transport layer and the routing and congestion control algorithms
CO5.	make use of the routing and congestion control algorithms

Core Course	
Course Code: GLIT62	**Course Title: ANDROID PROGRAMMING**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of android
CO2.	demonstrate user interface with views
CO3.	make use of views to display images and menus
CO4.	analyze the location based services, content providers, data persistence
CO5.	construct simple program using database

Core Course	
Course Code: GLIT6L	**Course Title: ANDROID PROGRAMMING LAB**
On successful completion of the course, the learners should be able to	
CO1.	build simple programs using controls
CO2.	examine programs using Selection Widgets
CO3.	construct programs to connect the SQLite Database
CO4.	develop programsusing Database
CO5.	create the Options Menu

Core Course	
Course Code: GLIT6P	**Course Title: MAJOR PROJECT**
On successful completion of the course, the learners should be able to	
CO1.	discover potential research areas in the field of IT
CO2.	conduct a survey of available literature in the preferred field of study
CO3.	compare and contrast the several existing solutions for research challenge
CO4.	formulate and propose a plan for creating a solution for the research plan identified
CO5.	report the findings of the study conducted in the preferred domain

Elective Course	
Course Code: GLIT5E1	**Course Title: WEB TECHNOLOGY**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of .Net framework andVB.Net & ASP.Net terminologies
CO2.	experiment applications to perform various operations on Windows Form controls
CO3.	design the interface for Web applications using the Web based controls
CO4.	explain the steps to implement security and connect applications with database using datasource controls
CO5.	build website using master pages and CSS to give better look and feel to Web applications

Elective Course	
Course Code: GLIT5E2	**Course Title: CYBER SECURITY**
On successful completion of the course, the learners should be able to	
CO1.	illustrate computer and network security concepts
CO2.	classify transport level security
CO3.	analyze wireless network security
CO4.	distinguish various network security concepts
CO5.	discuss IP security

Elective Course	
Course Code: GLIT5E3	**Course Title: SOFTWARE ENGINEERING**
On successful completion of the course, the learners should be able to	
CO1.	describe the basic concepts of software engineering and features of modern programming language
CO2.	explicate the planning models, requirement, cost estimation, Software design
CO3.	analyze software design and cost estimation, validation and maintenance techniques
CO4.	use software requirement specification techniques and design techniques
CO5.	compare various planning models, different project sizes, cost estimation and design techniques, walkthroughs and inspections

Elective Course	
Course Code: GLIT5E4	**Course Title: SYSTEM SOFTWARE**
On successful completion of the course, the learners should be able to	
CO1.	summarize various machine architecture, assemblers, loaders, linkers, micro processor and compilers
CO2.	classify the types of assemblers
CO3.	analyze loaders and linkers
CO4.	explain micro processor
CO5.	illustrate the functions of compilers

Elective Course	
Course Code: GLIT6E1	**Course Title: COMPUTER GRAPHICS**
On successful completion of the course, the learners should be able to	
CO1.	summarize the various Graphic systems, the concepts of GUI, interactive input methods and basic3D concepts
CO2.	discuss the various algorithms for Output Primitives
CO3.	outline the attributes of Output Primitives
CO4.	apply various types of Transformations to 2D objects
CO5.	illustrate the different clipping methods

Elective Course	
Course Code: GLIT6E2	**Course Title: INTRODUCTION TO EMBEDDED SYSTEMS**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of embedded systems
CO2.	describe Advanced Architectures and Processor-Memory Organizations
CO3.	illustrate the concepts of Real Time Operating Systems
CO4.	explain Programming Concepts and Embedded Programming in C, C++ and Java
CO5.	analyze the case studies of real time operating systems

Non Major Elective Course	
Course Code: GLIT3N	**Course Title: INTRODUCTION TO IT**
On successful completion of the course, the learners should be able to	
CO1.	explain the fundamental concepts of computers, its architecture, memory and storage
CO2.	identify the parts of a computer
CO3.	classify the input and output devices, generations of computers and classification of computers
CO4.	summarize the categories in software and networks
CO5.	list out the future trends in IT field

Non Major Elective Course	
Course Code: GLIT4N	**Course Title: INTERNET & HTML**
On successful completion of the course, the learners should be able to	
CO1.	explain the fundamental concepts of Internet, its Address and browsers
CO2.	classify the applications of Internet
CO3.	summarize the features of HTML
CO4.	name the multimedia components that could be embedded in web pages
CO5.	design simple web pages using HTML

Discipline Specific Course	
Course Code: GLIT4DSL	**Course Title: C GRAPHICS LAB**
On successful completion of the course, the learners should be able to	
CO1.	make use of the basic concepts of computer graphics
CO2.	create animations using c programming
CO3.	develop models on graphical environment
CO4.	apply clipping and filling techniques for modifying an object
CO5.	display a text using different styles

Job Oriented Course	
Course Code: GLJO65	**Course Title: CALL CENTER MANAGEMENT**
On successful completion of the course, the learners should be able to	
CO1.	describe the basic concepts of Call center management
CO2.	summarize classification, functioning andworking environment of call centers
CO3.	identify customers, services and offer solutions
CO4.	interpret complaints in tricky situation
CO5.	use recruitment and training process

Job Oriented Course	
Course Code: GLJO65L	**Course Title: CALL CENTER MANAGEMENT LAB**
On successful completion of the course, the learners should be able to	
CO1.	demonstrate group discussion
CO2.	illustrate conversational practice
CO3.	apply business English during interview
CO4.	analyze customers and handle with care
CO5.	implement voice and vocal training

Add On Course	
Course Code: GLITEC1	**Course Title: WEB BUILDING**
On successful completion of the course, the learners should be able to	
CO1.	summarize the fundamental concepts of PHP
CO2.	classify the different control structures
CO3.	define functions and relate arguments
CO4.	summarize the concepts of arrays
CO5.	tell how to create databases, link with HTML forms and retrieve data

Add On Course	
Course Code: GLITEC2	**Course Title: CLOUD COMPUTING**
On successful completion of the course, the learners should be able to	
CO1.	summarize the basic concepts of Cloud Computing Technologies
CO2.	outline the Architecture and types of models in Cloud
CO3.	analyze the services and storage
CO4.	explain the concepts of Virtualization
CO5.	identify the areas of Cloud Applications