



**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 with ethics, managerial skills and quality control required to maintain professionalism in the IT industries.
PEO3.	adapt to recent trends of IT by life-long learning and become self employed by developing software

**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: BDIT11	Course Title: PROGRAMMING IN C
On successful completion of the course, the learners should be able to	
CO1 [K2]	explain the basic building blocks and structured programming concepts in C
CO2 [K2]	discuss user defined functions, structures, unions, pointers and files
CO3 [K3]	develop simple programs using functions, arrays, string functions and file
CO4 [K4]	compare the decision making statements, looping statements, functions, structures,unions
CO5 [K6]	create simple programs using decision making and looping statements

Core Course	
Course Code: BDIT1L1	Course Title: C PROGRAMMING LAB
On successful completion of the course, the learners should be able to	
CO1 [K3]	experiment C programs using strings functions and mathematical calculations
CO2 [K3]	construct simple programs using pointers and file
CO3 [K6]	build C programs using various data types and operators
CO4 [K6]	create simple programs using decision making and looping statements
CO5 [K6]	develop programs using user defined functions, structures and arrays

	<b>Core Course</b>	
<b>Course Code: BDIT1L2</b>		<b>Course Title: PC SOFTWARE LAB</b>
On successful completion of the course, the learners should be able to		
CO1 [K3]	construct Word document to perform mail merge operation	
CO2 [K3]	build Excel Sheets to formulate complex calculations and do statistical analysis using Charts	
CO3 [K6]	design business presentations with elegant animations	
CO4 [K6]	create and format Word documents	
CO5 [K6]	develop various personal / business documents using Microsoft Word	

	<b>Allied Course</b>	
<b>Course Code: BDIT1A</b>		<b>Course Title: COMPUTER SYSTEM ARCHITECTURE</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	summarize the basic concepts of digital logic, number systems, gates, basic structure of computers, memory systems, processing and machine instructions	
CO2 [K2]	classify various flip-flops, registers and memory systems	
CO3 [K3]	solve problems in number systems and arithmetic circuits	
CO4 [K4]	compare various types of flip-flops, registers and memory systems	
CO5 [K4]	analyze the memory systems, processing unit and machine instructions	

		Core Course		
Course Code: BDIT21			Course Title: OBJECT ORIENTED PROGRAMMING WITH C++	
On successful completion of the course, the learners should be able to				
CO1 [K2]	explain the OOP concepts, tokens, expressions, control structures, classes, objects, constructors, destructors, pointers and files			
CO2 [K2]	summarize the concept of pointers, virtual functions, templates and exception handling			
CO3 [K3]	make use of inheritance and operator overloading			
CO4 [K4]	analyze the functions, operator overloading and inheritance			
CO5 [K6]	create programs using functions, constructor and destructor			

	Core Course		
Course Code:BDIT2L		Course Title: ADVANCED C&C++ PROGRAMMING LAB	
On successful completion of the course, the learners should be able to			
CO1 [K3]	apply overloading, structure, constructor		
CO2 [K3]	implement sorting and searching techniques using C++		
CO3 [K3]	perform template, exception handling, and file using C++		
CO4 [K6]	develop basic pointer concepts and file operations in C		
CO5 [K6]	construct code to perform function and inheritance concepts		

		Allied Course		
Course Code: BDIT2A			Course Title : MATHEMATICAL FOUNDATIONS	
On successful completion of the course, the learners should be able to				
CO1 [K2]	summarize the basic principles of foundations of Mathematics			
CO2 [K3]	solve problems using mathematical logic, sets, recurrence relations, combinatorics and system of linear equations			
CO3 [K3]	perform operations on sets, relations, functions and matrices			
CO4 [K4]	analyze the solutions to system of linear equations and the properties of eigen values and eigen vectors			
CO5 [K4]	classify the types of sets, relations, functions and matrices			

	<b>Core Course</b>	
<b>Course Code: BDIT31</b>	<b>Course Title: RDBMS</b>	
On successful completion of the course, the learners should be able to		
CO1 [K2]	summarize the fundamental concepts of DBMS, database architecture, data models, normalization concepts and database terminologies	
CO2 [K2]	demonstrate the ER model, Relational Algebra operations, PL/SQL Procedures, Functions, Package and Triggers.	
CO3 [K3]	use different query constructs for efficient retrieval of information from a database	
CO4 [K4]	analyze PL/SQL Procedures, Functions, Package and Triggers	
CO5 [K6]	create and populate a RDBMS with constraints and keys using SQL	

	<b>Core Course</b>	
<b>Course Code: BDIT32</b>	<b>Course Title: WEB DESIGNING</b>	
On successful completion of the course, the learners should be able to		
CO1 [K2]	explain the basic HTML elements and CSS terminologies	
CO2 [K2]	discuss the basic concepts of JavaScript and Ajax	
CO3 [K3]	apply the fundamental HTML tags, multimedia components and FORM elements for Designing Webpages, JavaScript and AJAX	
CO4 [K4]	analyze CSS property, JavaScript, function, events & AJAX	
CO5 [K6]	construct the layout of multiple web pages using Cascading Style Sheet	

	Core Course		
Course Code: BDIT3L		Course Title: RDBMS LAB	
On successful completion of the course, the learners should be able to			
CO1 [K3]	implement Basic DDL, DML and DCL commands		
CO2 [K3]	perform simple queries in SQL		
CO3 [K3]	make use of Aggregate and Group functions		
CO4 [K3]	Apply nested and join queries to combine multiple tables		
CO5 [K6]	develop PL/SQL code for procedures, triggers, cursors, exception handling etc.		

		Allied Course		
Course Code: BDIT3A			Course Title: RESOURCE MANAGEMENT TECHNIQUES	
On successful completion of the course, the learners should be able to				
CO1 [K2]	explain the various methods, rules and terms in solving decision making problems			
CO2 [K3]	solve problems using Graphical method and Simplex method			
CO3 [K3]	use various methods to solve Transportation and Assignment Problems			
CO4 [K6]	construct networks to determine the Critical Path using PERT/CPM			
CO5 [K6]	formulate the decision making problems into mathematical models			

	<b>Allied Course</b>	
<b>Course Code: BDIT3AL</b>	<b>Course Title: WEB DESIGNING LAB</b>	
On successful completion of the course, the learners should be able to		
CO1 [K3]	experiment with navigational tag by creating multiple web pages	
CO2 [K3]	make use of multimedia components in web page creation	
CO3 [K6]	design Web pages by applying the fundamental HTML tags/FORM elements	
CO4 [K6]	develop dynamic web pages using JavaScript and AJAX	
CO5 [K6]	construct the layout of multiple web pages using Cascading Style Sheet.	



		Core Course	
<b>Course Code: BDIT41</b>			<b>Course Title: OPERATING SYSTEM</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	explain the basic concepts of Operating system, file system, mass storage structure and algorithms.		
CO2 [K2]	summarize Process synchronization, deadlocks and memory management strategies.		
CO3 [K3]	experiment Process Scheduling, Page Replacement and Disk Scheduling.		
CO4 [K4]	analyze the scheduling algorithms and file system implementation of operating system.		
CO5 [K4]	illustrate the access and allocation methods of File system.		

		Core Course	
<b>Course Code: BDIT4L</b>			<b>Course Title: PYTHON PROGRAMMING LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	demonstrate the various features of python		
CO2 [K3]	execute various built-in functions in python		
CO3 [K3]	perform the operations using list, dictionary, string and file		
CO4 [K3]	implement searching, sorting and conversion concepts		
CO5 [K6]	construct code to perform mathematical problems using function		

	<b>Allied Course</b>		
<b>Course Code: BDIT4A</b>		<b>Course Title: DATA STRUCTURES</b>	
On successful completion of the course, the learners should be able to			
CO1 [K2]	summarize the basic concepts of data structures, sorting and searching		
CO2 [K2]	explain various operations in data structures		
CO3 [K3]	experiment techniques behind various data structures, sorting and searching		
CO4 [K4]	analyze the concepts behind various data structures		
CO5 [K6]	compile the basic operations using various data structures		

	<b>Allied Course</b>		
<b>Course Code: BDIT4AL</b>		<b>Course Title: DATA STRUCTURES LAB</b>	
On successful completion of the course, the learners should be able to			
CO1 [K2]	demonstrate the basic concepts of Queue		
CO2 [K3]	make use of various features of Data Structures		
CO3 [K3]	execute the operations of Arrays and Linked List		
CO4 [K3]	implement the operations of Stack		
CO5 [K6]	construct code to perform sorting and searching using various techniques		

		<b>Discipline Specific Course</b>	
<b>Course Code: BDIT4DSL</b>			<b>Course Title: C GRAPHICS LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K3]	make use of the basic concepts of computer graphics		
CO2 [K3]	apply filling techniques for modifying an object		
CO3 [K3]	apply different styles to text		
CO4 [K6]	create animations using C programming		
CO5 [K6]	develop models on graphical environment		

		<b>Core Course</b>	
<b>Course Code: BDIT51</b>			<b>Course Title: JAVA PROGRAMMING</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	summarize the basic concepts of object oriented, applet, graphics programming and AWT controls, layout managers and Menu		
CO2 [K2]	demonstrate the concepts behind classes, objects and programming constructs in Java		
CO3 [K3]	make use of Java features and applet		
CO4 [K4]	analyze the concepts of Java features and applet programming		
CO5 [K6]	construct simple application programs and applet programs		

		Core Course	
<b>Course Code: BDIT5L1</b>			<b>Course Title: JAVA PROGRAMMING LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K3]	implement console applications		
CO2 [K3]	apply inheritance, package and interface		
CO3 [K4]	examine multithreading and exception handling		
CO4 [K6]	build programs using applet and GUI components		
CO5 [K6]	create programs using layout managers and event handling		

		Core Course	
<b>Course Code: BDIT5L2</b>			<b>Course Title: WEB TECHNOLOGY LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K3]	make use of various common controls of VB.NET and ASP.NET		
CO2 [K3]	experiment applications to perform various operations on Windows Form controls		
CO3 [K3]	apply the Web based controls for designing the interface for any Web applications		
CO4 [K6]	create Database applications using DataBound and DataSource Controls		
CO5 [K6]	build website using master pages and CSS to give better look and feel to Web applications		

Core Course	
<b>Course Code: BDIT5V</b>	<b>Course Title: INTERNSHIP/ON-THE-JOB TRAINING</b>
On successful completion of the course, the learners should be able to	
CO1 [K2]	relate the class room theory with work place practice
CO2 [K3]	apply the practices / procedures observed in real time working environment
CO3 [K4]	analyse the workflow and communication flow prevailing in the institution/industry
CO4 [K5]	assess interests and abilities in their field of study
CO5 [K6]	propose strategies, policies and guidelines for enhancing efficiency of industrial/institutional operations

Elective Course	
<b>Course Code: BDIT5E1</b>	<b>Course Title: WEB TECHNOLOGY</b>
On successful completion of the course, the learners should be able to	
CO1 [K2]	summarize the basic concepts of .Net framework and terminologies in database, CSS, VB.Net & ASP.Net
CO2 [K2]	explain the basic concepts of ADO.NET and specify the steps to connect applications with database using database controls
CO3 [K3]	experiment applications to perform various operations using Windows Form controls
CO4 [K4]	analyze Validation Controls, Login Controls and CSS
CO5 [K6]	design the interface for Web applications using the Web based controls and master pages

Elective Course		
<b>Course Code: BDIT5E2</b>		<b>Course Title: CYBER SECURITY</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	discuss IP security	
CO2 [K3]	illustrate computer and network security concepts	
CO3 [K4]	classify transport level security	
CO4 [K4]	analyze various network security concepts	
CO5 [K5]	justify the concepts in various network security	

Elective Course		
<b>Course Code: BDIT5E3</b>		<b>Course Title: SOFTWARE ENGINEERING</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	describe the basic concepts of software engineering	
CO2 [K2]	explicate the planning models, requirement, cost estimation, Software design	
CO3 [K3]	use software requirement specification techniques and design techniques	
CO4 [K4]	analyze software design, cost estimation, validation and maintenance techniques	
CO5 [K4]	compare various planning models, different project sizes, cost estimation and design techniques, walkthroughs and inspections	

		<b>Elective Course</b>	
<b>Course Code: BDIT5E4</b>			<b>Course Title: SYSTEM SOFTWARE</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	summarize various machine architecture, assemblers, loaders, linkers, microprocessor and compilers		
CO2 [K2]	classify the types of assemblers		
CO3 [K4]	analyze loaders and linkers		
CO4 [K4]	explain microprocessor		
CO5 [K5]	justify the functions of compilers		

		<b>Skill Based Course</b>	
<b>Course Code: BDCG51</b>			<b>Course Title: CAREER GUIDANCE</b>
On successful completion of the course, the learners should be able to			
CO1 [K1]	recall the basic concepts about history, culture of India and languages		
CO2 [K2]	summarize the various events related to Indian economy and Indian national movement		
CO3 [K2]	explain the multi - dimensional aspects of science.		
CO4 [K3]	apply the mathematical knowledge to solve different problems		
CO5 [K5]	analyze the problems related to mental ability and reasoning power		

		Core Course	
<b>Course Code: BDIT61</b>			<b>Course Title: COMPUTER NETWORKS</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	summarize the basic concepts of computer networks, DNS and cryptography		
CO2 [K2]	explain the various transmission modes, the protocols of data link and transport layer and the routing and congestion control algorithms		
CO3 [K3]	make use of cryptography, routing and congestion control algorithms		
CO4 [K4]	classify the network reference models		
CO5 [K4]	distinguish the various layers of OSI model		

		Core Course	
<b>Course Code: BDIT62</b>			<b>Course Title: ANDROID PROGRAMMING</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	summarize Android features, architecture, activities, menus, data persistence and Publishing Android application		
CO2 [K2]	demonstrate activities, Indents, fragments and user interface with views		
CO3 [K3]	make use of views to display images and menus		
CO4 [K4]	analyze the layouts, methods, deploying APK files		
CO5 [K6]	construct simple program using views and database		



Core Course		
<b>Course Code: BDIT6L</b>		<b>Course Title: ANDROID PROGRAMMING LAB</b>
On successful completion of the course, the learners should be able to		
CO1 [K3]	build app using menus	
CO2 [K3]	implement database concepts in Android	
CO3 [K6]	design user Interfaces and Layouts in Android App	
CO4 [K6]	develop simple Android applications	
CO5 [K6]	create web pages using web view control	

Core Course		
<b>Course Code: BDIT6P</b>		<b>Course Title: MAJOR PROJECT</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	illustrate the findings of the study conducted in the preferred domain	
CO2 [K3]	discover potential research areas in the field of IT	
CO3 [K3]	conduct a survey of available literature in the preferred field of study	
CO4 [K4]	compare and contrast the several existing solutions for research challenge	
CO5 [K6]	formulate and propose a plan for creating a solution for the research plan identified	

Elective Course		
<b>Course Code: BDIT6E1</b>		<b>Course Title: COMPUTER GRAPHICS</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	summarize the various Graphic systems, the concepts of GUI, interactive input methods basic 2D and 3D concepts	
CO2 [K2]	explain the attributes of Output Primitives	
CO3 [K3]	apply various types of Transformations to 2D objects	
CO4 [K4]	illustrate the different clipping methods	
CO5 [K5]	justify the various algorithms for Output Primitives	

Elective Course		
<b>Course Code: BDIT6E2</b>		<b>Course Title: INTERNET OF THINGS</b>
On successful completion of the course, the learners should be able to		
CO1 [K2]	summarize the basic concepts of Internet of Things	
CO2 [K2]	describe prototyping, embedded devices , manufactures and ethics	
CO3 [K4]	illustrate Connected Devices, internet principles and prototyping	
CO4 [K4]	analyze embedded devices, business models , manufactures and ethics	
CO5 [K5]	evaluate design principles of connected devices, embedded devices and business models	

		<b>Non Major Elective Course</b>	
<b>Course Code: BDIT4N</b>			<b>Course Title: INTRODUCTION TO IT</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	explain the fundamental concepts of computers, it's architecture, memory and storage		
CO2 [K2]	discuss the future trends in IT field		
CO3 [K3]	identify the parts of a computer		
CO4 [K4]	classify the computers, input and output devices and generations of computers		
CO5 [K4]	categorize various software and networks		

		<b>Non Major Elective Course</b>	
<b>Course Code: BDIT5N</b>			<b>Course Title: INTERNET &amp; HTML</b>
On successful completion of the course, the learners should be able to			
CO1 [K2]	explain the fundamental concepts of Internet, its Address, browsers and Internet applications		
CO2 [K2]	summarize the features of HTML		
CO3 [K3]	utilize HTML tags to display tables, images, marquees and lists		
CO4 [K4]	analyze the applications of Internet		
CO5 [K6]	design a web page using HTML tags		

	<b>Job Oriented Course</b>		
<b>Course Code: BDJO65</b>		<b>Course Title: CALL CENTER MANAGEMENT</b>	
On successful completion of the course, the learners should be able to			
CO1 [K2]	describe the basic concepts of Call center management		
CO2 [K2]	summarize classification, functioning and working environment of call centers		
CO3 [K3]	identify customers, services and offer solutions		
CO4 [K4]	analyze various recruitment and training process		
CO5 [K5]	Interpret the complaints in tricky situation		

	<b>Job Oriented Course</b>		
<b>Course Code: BDJO65L</b>		<b>Course Title: CALL CENTER MANAGEMENT LAB</b>	
On successful completion of the course, the learners should be able to			
CO1 [K2]	demonstrate group discussion		
CO2 [K3]	apply business English during interview		
CO3 [K3]	implement voice and vocal training		
CO4 [K4]	Illustrate conversational practice		
CO5 [K4]	analyze customers and handle with care		

		<b>Extra Credit Course</b>	
<b>Course Code: BDITECL1</b>			<b>Course Title: PROGRAMMING IN PHP LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K3]	apply the fundamental concepts of PHP		
CO2 [K3]	use control statements and looping statements		
CO3 [K3]	construct program to connect application with MySQL		
CO4 [K6]	create sessions and cookies		
CO5 [K6]	design simple webpage		

		<b>Extra Credit Course</b>	
<b>Course Code: BDITECL2</b>			<b>Course Title: DESIGNING WITH CORELDRAW LAB</b>
On successful completion of the course, the learners should be able to			
CO1 [K3]	apply special effects in designing cards		
CO2 [K3]	construct patterns using curves and lines		
CO3 [K6]	create logo using various images, colors, fonts		
CO4 [K6]	design labels using shapes, colors and objects		
CO5 [K6]	develop a cover using metallic effects		