Department of Computer Science								
1.1.2 Details of courses offered by the institution that focus on employability/ entrepreneurship/ skill development during the year.								
S.No.	Name of the Course	Course Code	Em	Activities Focusing on Employability	En	Activities Focusing on Entrepreneurship	SD	Activities Focusing on Skill Development	Outcome
2023-2024								
1	Core Course I: Analysis & Design of Algorithms	SP231CC1	☑	Creating an application using Stack			☑	Problem solving using Sorting techniques.	To get knowledge about algorithms and determine their time complexity.
2	Core Course II: Object Oriented Analysis and Design & C++	SP231CC2	☑	Illustrate an Object and their attributes	☑	Derive the relationship between any two classes.	☑	Program creation using Class and Objects.	To understand the concept of object-oriented development and modelling techniques.
3	Core Course I: Lab Course: Algorithm and OOPs Lab	SP231CP1	☑	Problem Solving using Recursion			☑	Problem Solving using Data Structures.	To understand the concepts of object oriented programming with respect to C++.
4	Elective Course I: (a) Python Programming	SP231EC1	☑	Python program to forecast weather			☑	Creating programs using Loops.	To develop web applications and client server networking applications using Python.
5	Elective Course I: (b) Multimedia and its Applications	SP231EC2			☑		☑		To apply and analyze the role of multimedia in internet and real time applications.
6	Elective Course I: (c) Embedded Systems	SP231EC3	☑		☑		☑		To understand the concept of 8051 microcontroller and Instruction set.
7	Elective Course II: (a) Advanced Software Engineering	SP231EC4	☑	Design a Software Engineering model	☑	Problem solving using estimation	☑	Design and illustrate the Waterfall Model	To understand the software engineering models.
8	Elective Course II: (b) Internet of Things	SP231EC5	☑				☑		To develop applications with C using Arduino IDE.
9	Elective Course II: (c) Critical Thinking, Design Thinking and Problem Solving	SP231EC6			☑		☑		To focus on the explicit development of critical thinking and problem solving skills.
10	Elective Lab Course I: Python Programming Lab	SP231EP1	☑	Workshop on Python Programming			☑	Program creation using Arguments and Return Values in Python Function.	To write programs in Python using OOPS concepts.
11	Core Course III: Data Mining and Warehousing	SP232CC1	☑	Compare data mining and knowledge discovery in databases	☑	Seminar on Star schema	☑	Implement the algorithm using R Tool	To compare and evaluate different data mining techniques like classification, prediction, Clustering and association rule mining.
12	Core Course IV: Advanced Java Programming	SP232CC2					☑	Develop a project using RMI	To learn the basic functions, principles and concepts of advanced Java programming.
13	Core Lab Course II: Advanced Java Programming Lab	SP232CP1					☑	Develop programs using JSP	To implement the simple programs using JSP,JAR and to provide knowledge on using Servlets, Applets.
14	Elective Course III: a) Advanced Operating Systems	SP232EC1	☑	Seminar on the SUN network file system	☑	Assignment on Inter Process Communication	☑	Discussion about applications of real time OS	To understand various process management concepts including scheduling, deadlocks and distributed file systems.

No	Course	Code		Activity 1		Activity 2		Activity 3	Course Outcome
15	Elective Course III: b) Mobile Computing	SP232EC2	☑		☑		☑		To understand the need and requirements of mobile communication.
16	Elective Course III: c) Block Chain Technology	SP232EC3	☑		☑		☑		To demonstrate blockchain technology and crypto currency.
17	Elective Course IV: a) Artificial Intelligence & Machine Learning	SP232EC4	☑	Seminar on Building AI systems	☑	Seminar on Big Data processing	☑	Seminar on the power of Machine Learning	To demonstrate AI problems and techniques.
18	Elective Course IV: b) Web Services	SP232EC5	☑				☑		To get an overview of distributed computing,XML,and its technologies.
19	Elective Course IV: c) Robotic Process Automation for Business	SP232EC6	☑				☑		To gain knowledge in application of RPA in business scenarios.
20	Skill Enhancement Course I: Data Mining Lab Using R	SP232EC1					☑	Program creation for Clustering technique	To learn the concepts of Data Mining algorithms namely classification, clustering, regression.
21	Core Course I: Python Programming	SU231CC1	☑	Python program creation using List			☑	Python program creation using List, Tuples and Dictionaries	To handle big data and perform complex mathematics and also read and modify files using Python.
22	Core Lab Course I: Python Programming Lab	SU231CP1	☑	Create program using Loops			☑	Develop a Python program using Functions	To handle big data and perform complex mathematics and also read and modify files using Python.
23	Elective Course I: Numerical Methods	SU231EC1					☑	Assignment on Interpolation	To apply numerical methods to obtain approximate solutions to mathematical problems.
24	Non Major Elective NME I: Office Automation	SU231NM1	☑	Create a Calender			☑	Formatting a document	To work with Office packages.
25	Skill Enhancement - Foundation Course : Problem Solving Techniques	SU231FC1	☑	Assignment on Interpreters and Compilers	☑	Case study on PDC	☑	Draw a DFD for a module in ATM	To understand the systematic approach to problem solving.
26	Core Course II: Data Structure and Algorithms	SU232CC1	☑	Assignment on applications of Lists	☑	Seminar on applications of Graphs	☑	Seminar on Hash Functions	To recall the basic data structures like arrays, linked lists, stacks, queues, trees and graphs.
27	Core Lab Course II: Data Structure and Algorithms Lab	SU232CP1	☑	Implement the Binary Search algorithm	☑	Comment on a code and explain the logic behind BFS algorithm.	☑	Represent a Graph using an Adjacency List or Matrix.	To remember and implement basic data structures linked lists, stacks, queues, trees, graphs.
28	Elective Course II: Discrete Mathematics	SU232EC1					☑	Seminar on Basics of Counting	To apply counting principles to determine probabilities.
29	Non Major Elective NME II: Introduction to HTML	SU232NM1					☑	Develop HTML coding using different tags to create web pages	To understand the use of HTML elements like headings, paragraphs, lists and links.
30	Skill Enhancement Course SEC - I: Advanced Excel	SU232SE1	☑	Implement protection mechanisms using Excel's worksheet and cell protection features	☑	Organize data efficiently using Sorting options	☑	Use basic functions like SUM, AVERAGE, and COUNT	To use a wide range of advanced excel functions.

#	Subject	Code	✓	Activity 1	✓	Activity 2	✓	Activity 3	Course Outcome
31	Major Core III: Progr	SC2131	☑	Create a program using Packages	☑	Create an Applet program for color change	☑	Seminar on Method Overriding	To write programs with both command-line and graphical user interfaces.
32	Major Core IV: Data Structures and Algorithms	SC2132					☑	Assignment on Binary Tree Traversal	To implement various kinds of searching and sorting techniques.
33	Major Practical III: Java Programming	SC21P3					☑	Develop program using Constructors	To write sophisticated Java applications.
34	Major Practical IV: Data Structure Using C++	SC21P4					☑	Create programs using Linked List	To implement stacks, queues, Search trees, and hash tables to solve various computing problems.
35	Allied III: Theory : Numerical and Statistical Methods	SA2131					☑	Apply Newton's Interpolation formulae and solve the exercises	To find the missing data points form the given data using interpolation and extrapolation.
36	SLC: Web Designing	SC20S1					☑	Develop a web page using CSS	To create mail id and simple web pages.
37	Major Core V: UNIX and Shell programming	SC2141	☑	Demostration on debugging Shell Scripts			☑	Exceute the commands in Linux	To understand the commands related to shell basics, vi editor and regular expression commands.
38	Major Elective I:(a) Software Engineering	SC2142	☑	Seminar on Waterflow model			☑	Case Study: Collect the requirements for a software	To function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
39	Major Elective I:(b) System Administration and Maintenance	SC2143	☑				☑		To configure, manage, and maintain a multi-user system and environment.
40	Major Elective I:(c) S	SC2144	☑				☑		To understand and describe the basic concepts of functional software testing.
41	Major Practical V: Sh	SC21P5					☑	Create shell script to print multiplication table using for loop in vi editor	To write scripts in vi editor.
42	Allied IV: Theory: Discrete Mathematics	SA2141					☑	Seminar on Graphs Model	To apply counting principles to determine probabilities.
43	SLC: Maya	SC20S2			☑	Creating Animation	☑	Creating Animation	To equip with the basic skills needed to create animations.
44	Major Core VI: Web Technology: Theory and Practice	SC2151	☑	Creating Web pages using HTML tags	☑	Creating web pages using CSS	☑	Creating web pages usir	To develop an ability to design and implement static and dynamic web pages.
45	Major Core VII: Relational Database Management System	SC2152	☑	Table creation			☑	Create an ER diagram for Bank account	To apply modern techniques to sustain the ever-changing era with values.
46	Major Core VIII: Mobile Computing and its Applications	SC2153	☑	Assignment on CDMA	☑	Assignment on Indexing methods	☑	Seminar on MANET	To understand the basic concepts and principles in mobile computing.
47	Major Elective II: (a) Multimedia Systems	SC2154	☑	Develop one multimedia project			☑	Develop one audio,video application	To create image and produce audio inserted multimedia projects.
48	Major Elective II: (b) Microprocessor & Assembly Language Programming	SC2155	☑		☑		☑		To understand basic architecture of 8 bit microprocessor.

#	Course	Code	✓		✓		✓		Objective
49	Major Elective II: (c) Open SourceTechnology	SC2156	☑		☑		☑		To make the students to gain experience using open source tools, languages and frameworks to prepare for careers in software development.
50	Major Practical VI: Web Technology Lab	SC21P6	☑	Develop a program using HTML tags			☑	Develop a program using HTML for student information	To build interactive web page using HTML.
51	Major Practical VII: SQL and PL/SQL	SC21P7	☑	Creating Tables			☑	Create table using Keys	To understand the PL/SQL to do such things as modify your business rule.
52	Research Project	SC21PR					☑	Demonstration on Modules	To get the expected output.
53	Major Core IX: Android Programming	SC2161	☑	Develop an Android application using Java	☑	Develop an Android application using Java for Farmer's Online App	☑	Develop an Android application using Java for Women Security	To apply the fundamental paradigms and technologies to develop mobile applications.
54	Major Core X: Computer Graphics	SC2162	☑	Prepare chart for 2D			☑	Assignment on CRT	To analyze two dimensional geometric transformations and view it.
55	Major Core XI: Operating Systems: Design Principles	SC2163	☑	Identify different types of OS and its features	☑	Assignment on Directories	☑	Prepare a chart for Input devices and their uses	To understand the basic concepts of an Operating System and the various system calls.
56	Major Core XII: Computer Networks	SC2164	☑	Prepare a video on Congestion Control Algorithms			☑	Creating Models	To develop programming skills which require to solve given problem.
57	Major Elective III: (a) PHP Programming	SC2165	☑	Demo on PHP Scripts for a login page	☑	Assignment on PHP data types	☑	Create a HTML form with PHP	To create dynamic web pages and websites.
58	Major Elective III: (b) Network Security	SC2166	☑		☑		☑		To understand the design concept of cryptography and authentication.
59	Major Elective III: (c) E-Commerce Technologies	SC2167	☑		☑		☑		To understand concept of Ecommerce and its types.
60	Major Practical VIII: Android Programming Lab	SC21P8					☑	Create application with the Activities, Intents and Views in Android	To create application workings with the User Interface using Views.
61	Major Practical IX: Computer GraphicsLab	SC21P9	☑	Develop any one graphics and animating program			☑	Develop any one graphics and animating program	To create simple animations applying graphics.
62	Skill Enhancement Course (*SEC): Photoshop CS6	SSK206	☑	Develop one Photoshop application to open and import photos	☑	Develop Photoshop application using different Pen tools	☑	Develop one Photoshop project using layers and layers styles	To create abilities to use Photoshop that are employable and rewarding.
	2022-2023								
63	Major Core I: Program	SC2011	☑	Create a program using Arrays			☑	Create a program using Pointers	To develop programming skills using the fundamentals and basics of C language.
64	Major Practical I: C P	SC20P1	☑	Create a program using Functions			☑	Develop programs using Recursion	To improve the programming skills through C language.
65	Allied I: Theory: Digital Principles and Applications	SA2011	☑	Problem solving for Binary to Decimal and vice versa	☑	Problem solving using Logic Gates	☑	Truth Tables creation	To impart the in-depth knowledge of logic gates, Boolean algebra, combinationalcircuits and sequential circuits.

No	Course	Code	✓	Activity 1	✓	Activity 2	✓	Activity 3	Objective
66	Non Major Elective (NME): Internet and Web Designing with HTML	SNM201	☑	Create a web page	☑	Design a web pages using Colors, Lists	☑	Create an Ordered an Unordered list	To specify design rules in constructing web pages and sites.
67	Major Core II: Object Oriented programming C++	SC2021	☑	Develop application using OOPs concepts			☑	Create program using Conditional statements	To impart basic knowledge of Programming Skills in C++language.
68	Major Practical II: C++ Programming	SC20P2	☑	Create a program for Matrix operations			☑	Create a program using Virtual Function	To develop skill to make use of arrays and pointers in C++ programs.
69	Allied II: Theory: Computer Organization and Architecture	SA2021	☑	Prepare a chart for the Memory Hierarchy	☑	Assignment on Multiprocessors	☑	Problem solving using Divide Overflow concepts	To understand the concept of computer architecture and working of a central processing unit and architecture of a computer.
70	Non Major Elective (NME): Desktop Publishing using Scribus	SNM202	☑	Create an Invitation	☑	Develop a Graphical application of Rainbow	☑	Create a design with font tools	To learn how the different aspects of scribus's interface can be used to develop all of the different document needs that we might have for desktop publishing.
71	SEC: Computer Liter	SEC202	☑	Saving and Opening a document			☑	Prepare a mail merge for a call letter for an interview	To create and format documents, manage worksheets and create multimedia presentations.
72	Major Core III: Progr	SC2131	☑	Assignment on Exception Handling	☑	Making students to do Applet programs	☑	Assignment on Abstract Classes	To write programs with both command-line and graphical user interfaces.
73	Major Core IV: Data Structures and Algorithms	SC2132					☑	Develop program for Traversal techniques	To implement various kinds of searching and sorting techniques.
74	Major Practical III: Java Programming	SC21P3					☑	Develop a Java program using Inheritance	To write sophisticated Java applications.
75	Major Practical IV: Data Structure Using C++	SC21P4					☑	Develop Linked list program and implement the operations	To implement Stacks, Queues, Search trees, and hash tables to solve various computing problems.
76	Allied III: Theory : Numerical and Statistical Methods	SA2131					☑	Assignment on Correlation	To find the missing data points form the given data using interpolation and extrapolation.
77	SLC: Web Designing	SC20S1					☑	Create a webpage using Templates	To create E-Mail id and simple web pages.
78	Major Core V: UNIX and Shell Programming	SC2141	☑	Demostration on Debugging Shell Scripts			☑	Create a UniX program using Explicit For loop	To understand the commands related to shell basics, vi editor and regular expression commands.
79	Major Elective I:(a) Software Engineering	SC2142	☑	Seminar on Spiral model			☑	Develop a waterfall model for the ATM Project	To function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
80	Major Elective I:(b) System Administration and Maintenance	SC2143	☑				☑		To configure, manage, and maintain a multi-user system and environment.
81	Major Elective I:(c) S	SC2144	☑				☑		To understand and describe the basic concepts of functional software testing.

No	Course	Code							
82	Major Practical V: Shell Programming	SC21P5					☑	Practice the shell script commands	To write scripts in vi editor.
83	Allied IV: Theory: Discrete Mathematics	SA2141					☑	Assignment on Graph models	To apply counting principles to determine probabilities.
84	SLC: Maya	SC20S2			☑	Creating Animation for scenery	☑	Creating Animation for any one cartoon character	To equip with the basic skills needed to create animations.
85	Major Core VIII: Web Technology: Theory and Practice	SC2051	☑	Creating Web pages using HTML tags	☑	Creating web pages using CSS	☑	Creating web pages using web forms	To define the fundamental ideas and standards underlying Web Service Technology.
86	Major Core IX: Mobile Computing and its Applications	SC2052	☑	Assignment on CDMA	☑	Prepare a flowchart on data delivery	☑	Seminar on MANET	To describe the concepts of FDMA, TDMA, packet delivery and handover management.
87	Elective II: (a) Multir	SC2053	☑	Develop one multimedia project			☑	Develop one audio,video applications	To understand the requirements for multimedia preparation.
88	Elective II: (b) Microprocessor & Assembly Language Programming	SC2054	☑		☑		☑		To understand and classify the instruction set of 8085 microprocessor and distinguish the use of different instructions and apply it in assembly language programming.
89	Elective II: (c) Open SourceTechnology	SC2055	☑		☑		☑		To make the students to gain experience using Open Source tools, languages and frameworks to prepare for careers in software development.
90	Major Practical VII: V	SC20P7	☑	Develop a program using HTML tags			☑	Develop a program using HTML for student information	To construct and manipulate Java Script applications.
91	Major Core X: Andro	SC2061	☑	Develop an Android application using Java	☑	Develop an Android application using Java for Farmer's Online App	☑	Develop an Android application using Java for Women Security	To apply the fundamental paradigms and technologies to develop mobile applications.
92	Major Core XI: Comp	SC2062	☑	Prepare chart for 2D			☑	Assignment on CRT	To analyze two dimensional geometric transformations and view it.
93	Major Core XII: Operating Systems: Design Principles	SC2063	☑	Ask the students to identify the different types of OS and its features	☑	Assignment on Directories	☑	Prepare a chart for Input devices and their uses	To describe the various scheduling and memory management techniques and the page replacement techniques used for memory management.
94	Elective III: (a) PHP	SC2064	☑	To write PHP scripts for a login page	☑	Assignment on PHP data types	☑	Create a HTML form with PHP	To learn and use open source database management system MySQL.
95	Elective III: (b) Netw	SC2065	☑		☑		☑		To understand the design concept of cryptography and authentication.
96	Elective III: (c) E-Commerce Technologies	SC2066	☑		☑		☑		To study the various online payment and marketing on Web.
97	Major Practical VIII: Android Programming Lab	SC20P8					☑	Create application with the Activities, Intents and views in Android	To create application workings with the User Interface using Views.

#	Course	Code							Objective
98	Major Practical IX: Computer Graphics Lab	SC20P9	☑	Develop graphics for scenery			☑	Develop the graphics and animating program for any one cartoon character	To create simple animations applying graphics.
99	Skill Enhancement Course (*SEC): Photoshop CS6	SSK206	☑	Develop one Photoshop application to open and import photos	☑	Develop one photoshop application using different pen tools	☑	Develop one Photoshop project using layers and layers styles	To create abilities to use Photoshop that are employable and rewarding.
				2021-2022					
100	Major Core I: Program	SC2011	☑	Create a program using Arrays			☑	Create a program using Pointers	To develop programming skills using the fundamentals and basics of C language.
101	Major Practical I: C P	SC20P1	☑	Create a program using Functions			☑	Develop programs using Recursion	To improve the programming skills through C language.
102	Allied I: Theory: Digital Principles and Applications	SA2011	☑	Problem solving for binary to decimal and vice versa	☑	Problem solving using Logic Gates	☑	Truth Tables creation	To impart the in-depth knowledge of logic gates, Boolean algebra, combinational circuits and sequential circuits.
103	Non Major Elective (NME): Internet and Web Designing with HTML	SNM201	☑	Create a web page using HTML tags	☑	Design a web pages using Colors, Lists	☑	Create an Ordered and Unordered List	To specify design rules in constructing web pages and sites.
104	Major Core II: Object Oriented programming C++	SC2021	☑	Develop application using OOPs concepts			☑	Create program using Conditional statements	To impart basic knowledge of Programming Skills in C++language.
105	Major Practical II: C+	SC20P2	☑	Create a program for matrix operations			☑	Create a program using Virtual function	To develop skill to make use of arrays and pointers in C++ programs.
106	Allied II: Theory: Computer Organization and Architecture	SA2021	☑	Prepare a chart for the Memory Hierarchy	☑	Assignment on Multiprocessors	☑	Problem solving using Divide Overflow concepts	To understand the concept of computer architecture and working of a Central Processing Unit and architecture of a computer.
107	Non Major Elective (NME): Desktop Publishing using Scribus	SNM202	☑	Create an Invitation	☑	Develop a graphical application of rainbow	☑	Create a design with font tools	To learn how the different aspects of scribus's interface can be used to develop all of the different document needs that we might have for desktop publishing.
108	SEC: Computer Liter	SEC202	☑	Saving and Opening a document			☑	Mail merge	To create and format documents, manage worksheets and create Multimedia presentations.
109	Major Core III: Progr	SC2031	☑	Assignment for garbage constructor			☑	Develop an applet program to change background	To analyze the structure of the Java programming Language and Classes.
110	Major Core IV: Data Structures and Algorithms	SC2032	☑	Problem solving using Tree data structures	☑	Seminar on Sequential Organizations	☑	Problem solving using Heap Sort	To design algorithms to perform operations with Linear and Nonlinear Data Structures.
111	Major Core V: Computer Networks	SC2033	☑	Assignment on Switching			☑	Identify the strength and weakness of different data structures	To know the basics of computer networks.
112	Major Practical III: Java Programming	SC20P3	☑	Create a program using Constructors			☑	Create a program for Mouse Event Handling	To get skill in Java Programming language.

No.	Course	Code	✓		✓		✓		Objective
113	Major Practical IV: Data Structure Using C++	SC20P4	☑	Develop a program for Stack operations			☑	Implement Quick Sort for the given set of numbers	To design algorithms to perform operations with Linear and Nonlinear Data Structures.
114	Allied III: Theory: Numerical and Statistical Methods	SA2031	☑	Inverse of a matrix-E	☑	Assignment on Errors in computation	☑	Assignment on Interpolation	To understand the mathematical operations.
115	SLC: Web Designing	SC20S1					☑	Use HTML tags for headings	To design web pages.
116	Major Core VI: UNIX and Shell Programming	SC2041	☑	Assignment on the features of Unix			☑	Commands excecution in Unix	To know the working model of Unix OS.
117	Major Core VII: Relational Database Management Systems	SC2042	☑	Develop a Trigger operation			☑	Assignment on Timestamps	To learn the Database Management system concepts.
118	Elective I: (a) Software	SC2043	☑	Seminar on Waterflow model	☑	Assignment on characteristics of a good design	☑	Analyse the types of Interfaces-Discussion	To learn the software engineering process.
119	Elective I: (b) System Administration and Maintenance	SC2044	☑				☑		To know the basic structure of a computer system.
120	Elective I: (c) Software	SC2045	☑				☑		To learn the testing process.
121	Major Practical V: Shell Programming	SC20P5	☑	Use commands for executions			☑	Execute the commands in Unix	To know the shell programming concepts.
122	Major Practical VI: SQL and PL/SQL	SC20P6	☑	Create queries using constraints			☑	Create a table and do the manipulations	To learn the Database Management system concepts.
123	Allied IV: Theory: Discrete Mathematics	SA2041	☑	Assignment on Sets			☑	Assignment on Recursive Definitions	To know the fundamental mathematics.
124	SLC: Maya	SC20S2			☑	Creating Animation for scenery	☑	Creating Animation for any one cartoon character	To have a practice in animation.
125	Major Core VIII: Web Technology	SC1751	☑	Form design	☑	Mouse Events-Program	☑	Mouse events	To learn the basics of website creation.
126	Major Core IX: Operating Systems	SC1752	☑	Assignment on the types of Interrupts	☑	Seminar on different Scheduling Algorithms	☑	Problem solving in Paging	To know about the features of Operating Systems.
127	Elective II: (a)Data Communication and Computer Networks	SC1753	☑	Steps to set up a Mod	☑	Assignment on Ethernet	☑	Collect the list of Remote Logging apps	To know about Data Communication Protocols.
128	Elective II: (b) Data Mining	SC1754	☑				☑		To understand the Data Mining ideas.
129	Elective II: (c) Image Processing	SC1755	☑		☑		☑		To have a practice in processing images.
130	Practical VII: Web Technology Lab	SC17P7			☑	Webpage Creation using Frames	☑	Webpage Creation using Anchor tag	To learn the basics of website creation.
131	Skill Based Course (*SBC): Photoshop	SSK175			☑	Working with Images using different pen tools	☑	Working with Images using layers	To enhance images using advance editing tools to create magazine covers.
132	Major Core X: Android Application Development	SC1761	☑	Ideas to create Apps using Android			☑	Develop a simple Android application	To know about the Android Operating system.
133	Major Core XI: Computer Graphics and Multimedia	SC1762					☑	Simple Graphics Programs	To know the basics of graphics.
134	Major Core XII: UNIX and Shell Programming	SC1763	☑	Execute basic commands			☑	Create a program using Shell Function	To know the working model of Unix OS.

No	Course	Code	✔	Activity 1	✔	Activity 2	✔	Activity 3	Outcome
135	Elective III: (a)Mobile	SC1764	☑	Seminar on Bluetooth	☑	Assignment on Wireless LAN	☑	Collect the various Security techniques and their pros and cons	To know the concepts behind mobile computing.
136	Elective III: (b)Client / Server Technology	SC1765			☑		☑		To know about the different computing paradigms.
137	Elective III: (c)Artificial Intelligence and Expert System	SC1766					☑		To know about the basics of Artificial Intelligence.
138	Practical VIII: Android Application Development Lab	SC17P8	☑	Create a simple App for calculator			☑	Develop a simple Android application using Indents	To know about the Android Operating system and its applications.
139	Practical IX: Computer Graphics and Multimedia Lab	SC17P9					☑	Simple Graphics Program for color functions	To understand the graphical functions.
140	Skill Based Course (*SBC): Dreamweaver CS4	SSK176					☑	Image Editing Using Dreamweaver	To learn an image editing software.
2020-2021									
141	Major Core I: Programming Concepts in C	SC2011	☑	Create a program using Arrays			☑	Create a program using Pointers	To develop programming skills using the fundamentals and basics of C language.
142	Major Practical I: C P	SC20P1	☑	Create a program using Functions			☑	Develop programs using Recursion	To improve the programming skills through C language.
143	Allied I: Theory: Digital Principles and Applications	SA2011	☑	Problem solving for binary to decimal and vice versa	☑	Problem Solving using Logic Gates	☑	Truth Tables creation	To impart the in-depth knowledge of logic gates, Boolean algebra, combinationalcircuits and sequential circuits.
144	Non Major Elective (NME): Internet and Web Designing with HTML	SNM201	☑	Create a web page using HTML tags	☑	Design a web pages using colors, lists	☑	Design a web page using images	To specify design rules in constructing web pages and sites.
145	Major Core II: Object Oriented programming C++	SC2021	☑	Develop application using OOPs concepts			☑	Assignment on Storage classes	To impart basic knowledge of programming skills in C++ language.
146	Major Practical II: C++ Programming	SC20P2	☑	Create a program for matrix operations			☑	Create a program for file operations	To develop skill to make use of arrays and pointers in C++ programs.
147	Allied II: Theory: Computer Organization and Architecture	SA2021	☑	Prepare a chart for the Memory Hierarchy	☑	Assignment on Multiprocessors	☑	Problem solving using Divide Overflow concepts	To understand the concept of computer architecture and working of a central processing unit and architecture of a computer.
148	Non Major Elective (NME): Desktop Publishing using Scribus	SNM202	☑	Create an Invitation	☑	Design an applictaion for sun shine with graphics	☑	Create a design with font tools	To learn how the different aspects of scribus's interface can be used to develop all of the different document needs that we might have for desktop publishing.
149	SEC: Computer Liter	SEC202	☑	Saving and Opening a document			☑	Mail merge	To create and format documents, manage worksheets and create multimedia presentations.

No.	Course	Code		Activity 1		Activity 2		Activity 3	Course Outcome
150	Major Core III: Programming in Java	SC1731	☑	Assignment for garbage constructor	☑	Assignment on Exception handling	☑	Solve the given problem using Java Operators	To write programs with both command-line and graphical user interfaces.
151	Major Core IV: Microprocessor and Assembly Language Programming	SC1732			☑	Activity to operate the 8085 microprocessor	☑	Assignment on Memory Interfacing	To implement various kinds of Searching and Sorting techniques.
152	Major Core V: Data Structures and Algorithms	SC1733	☑	Assignment on Greed	☑	Group discussion on Linked List	☑	Assignment on Linked List	To write sophisticated Java applications.
153	Practical III: Programming in Java Lab	SC17P3	☑	Creation of program using Thread			☑	Write programs using Exception Handling	To implement Stacks, Queues, Search trees and Hash Tables to solve various computing problems.
154	Practical IV: Data Structure using C++ Lab	SC17P4					☑	Program using Quick Sort	To find the missing data points from the given data using interpolation and extrapolation.
155	Allied III: Theory: Numerical and Statistical Methods	SA1731	☑	Solving the equations using Gauss Elimination Method	☑	Ask the students to solve the given equations	☑	Solve Rank Correlation problem	To create mail id and simple web pages.
156	SLC: Flash	SC17S1	☑	Creating Sound files in Flash			☑	Making students to apply Tweened Animations to images	To design interactive animation.
157	Major Core VI: Web	SC1741	☑	Creation of web applications using TreeView control			☑	Creating web pages using Web Forms	To design web pages.
158	Major Core VII: RDBMS with Oracle	SC1742	☑	Ask to draw Entity-Relationship diagram	☑	Creating a Table and executing it using select, from, where clause	☑	Create Table, modify, alter and drop	To know about Database Management concepts.
159	Elective I: (a) System Analysis and Design	SC1743	☑	Seminar on HIPO	☑	Seminar on Linear Cycle	☑	Draw the ER diagram for employee details	To create a plan for a software or hardware system that meets the needs and requirements of a customer or user.
160	Elective I: (b) Softwa	SC1744	☑		☑		☑		To know the Software Engineering process.
161	Elective I: (c) Object Oriented Analysis and Design	SC1745	☑				☑		To understand the object models and designing skills.
162	Practical V: Web Pro	SC17P5	☑	Create program using Validation Controls			☑	Program using Navigation Controls	To design web pages.
163	Practical VI: Oracle Lab	SC17P6					☑	Creating PL/SQL programs using Loops	To know about database amanagement concepts.
164	Allied IV: Theory: Operations Research	SA1741	☑	Solving LPP solutions	☑	Solve Critical Path Method problems	☑	Solving Travelling Salesman Problem	To understand the problems related with Transportation, Assignment techniques.
165	SLC: Maya	SC17S2			☑	Creating Animation for scenery	☑	Creating Animation for any one cartoon character	To equip with the basic skills needed to create animations.
166	Major Core VIII: Web Technology	SC1751	☑	Demonstration on working with Tables	☑	Writing Mouse Events-Program	☑	Seminar on Element Type Declaration	To learn the basics of website creation.
167	Major Core IX: Operating Systems	SC1752	☑	Assign tasks to simulate and compare different scheduling algorithms like FCFS, Round Robin etc.	☑	Exhibition	☑	Seminar on Deadlock Detection	To know about the features of operating systems.

No	Course	Code	✓		✓		✓		Objective
168	Elective II: (a)Data Communication and Computer Networks	SC1753	☑	Asked students to explain Network concepts, Protocols.	☑	Seminar on LAN, MAN	☑	Creating Models of layers in the OSI Model	To know about data communication protocols.
169	Elective II: (b) Data Mining	SC1754	☑				☑		To understand the data mining ideas.
170	Elective II: (c) Image Processing	SC1755	☑		☑		☑		To have a practice in processing images.
171	Practical VII: Web Technology Lab	SC17P7			☑	Webpage Creation using basic tags	☑	Ask to create web page using Frames	To learn the basics of website creation.
172	Skill Based Course (*SBC): Photoshop	SSK175			☑	Working with Color Modes in Images	☑	Working with Retouching Tools in Images	To enhance images using advance editing tools to create magazine covers.
173	Major Core X: Android Application Development	SC1761	☑	Work with interactive UI widgets like buttons, text field, Checkbox etc.			☑	Develop a simple Android application	To know about the Android Operating system.
174	Major Core XI: Computer Graphics and Multimedia	SC1762					☑	Creating circle program using Bresenham's Circle Algorithm	To know the basics of graphics.
175	Major Core XII: UNIX and Shell Programming	SC1763	☑	Make to execute commands and work in vi Editor			☑	Demonstration using vi Editor	To know the working model of Unix OS.
176	Elective III: (a)Mobile	SC1764	☑	Seminar on GSM	☑	Seminar on Mobility in Wireless LAN	☑	Seminar on Security Models	To know the concepts behind mobile computing.
177	Elective III: (b)Client / Server Technology	SC1765			☑		☑		To know about the different computing paradigms.
178	Elective III: (c)Artificial Intelligence and Expert System	SC1766					☑		To know about the basics of Artificial Intelligence.
179	Practical VIII: Android Application Development Lab	SC17P8	☑	Develop a basic calculator app			☑	Develop a simple Android application	To know about the Android Operating system and its applications.
180	Practical IX: Computer Graphics and Multimedia Lab	SC17P9					☑	Creating Bouncing Ball program	To understand the graphical functions.
181	Skill Based Course (*SBC): Dreamweaver CS4	SSK176					☑	Image Editing Using Dreamweaver	To learn an image editing software.
2019-2020									
182	Major Core I: Programming in C	SC1711	☑	Demonstration on Control Structures			☑	Develop programs using Conditional Statements	To develop programming skills using the fundamentals and basics of C language.
183	Practical I: Programming in C Lab	SC17P1	☑	Creating program using Recursion			☑	Prepare a flow chart for Branching statements	To improve the programming skills through C language.
184	Allied I: Theory : Digital Computer Fundamentals	SA1711	☑	Seminar on Keyboard			☑	Convert Octal to Hexadecimal	To impart the in-depth knowledge of logic gates, Boolean algebra, combinational circuits and sequential circuits.
185	Non Major Elective Course(NMEC): CorelDraw	SNM171	☑	Ask to apply special effects to images	☑	Creating Book Cover	☑	Making students to work with Object Shapes	To specify design rules in constructing web pages and sites.

#	Course	Code	✓	Activity 1	✓	Activity 2	✓	Activity 3	Objective
186	Major Core II: Object Oriented Programming in C++	SC1721	☑	Seminar on Constructors	☑	Write program using Templates	☑	Create a program using Overloading concepts	To impart basic knowledge of Programming Skills in C++language.
187	Practical II: Programming in C++ Lab	SC17P2	☑	Ask to write program using Inheritance			☑	Create program using Friend function	To develop skill to make use of arrays and pointers in C++ programs.
188	Allied II: Theory: PC Hardware and Troubleshooting	SA1721	☑	Seminar on ROM			☑	Demonstration on Motherboard installation	To understand the concept of computer architecture and working of a central processing unit & architecture of a computer.
189	Non Major Elective Course(NMEC): Internet and its Applications	SNM172	☑	Creating E-Mail id			☑	Creation of Tables using HTML	To learn how the different aspects of scribus's interface can be used to develop all of the different document needs that we might have for desktop publishing.
190	Major Core III: Progr	SC1731	☑	Creation of Applet program	☑	Program using AWT Controls	☑	Solve programs using Operators	To create and format documents, manage worksheets and create multimedia presentations.
191	Major Core IV: Microprocessor and Assembly Language Programming	SC1732			☑	Activity to operate the 8085 microprocessor	☑	Seminar on BCD to Binary conversion	To write programs with both command-line and graphical user interfaces.
192	Major Core V: Data Structures and Algorithms	SC1733	☑	Algorithm for knapsack problem	☑	Seminar on Circular Linked List	☑	Seminar on Linked Queue	To implement various kinds of Searching and Sorting techniques.
193	Practical III: Programming in Java Lab	SC17P3	☑	Creation of program using Thread			☑	Ask the students to write programs using Exception Handling	To write sophisticated Java applications.
194	Practical IV: Data Structure using C++ Lab	SC17P4					☑	Program using Quick Sort	To implement Stacks, Queues, Search trees, and Hash Tables to solve various computing problems.
195	Allied III: Theory: Numerical and Statistical Methods	SA1731	☑	Solving the equations using Gauss Elimination Method	☑	Ask the students to solve the given equations	☑	Solve Rank Correlation problem	To find the missing data points from the given data using Interpolation and Extrapolation.
196	SLC: Flash	SC17S1	☑				☑	Making students to apply Tweened Animations to images	To create E-Mail id and simple web pages.
197	Major Core VI: Web	SC1741	☑	Creation of web applications using TreeView control			☑	Creating web pages using Web Forms	To design web pages.
198	Major Core VII: RDBMS with Oracle	SC1742	☑	Ask to draw ER diagram	☑	Creating a Table and executing it using select, from, where clause	☑	Create Table, modify, alter and drop	To know about Database Management concepts.
199	Elective I: (a) System Analysis and Design	SC1743	☑	Seminar on HIPO	☑	Seminar on Linear Cycle	☑	Draw the ER diagram for employee details	To know the Software Engineering process.
200	Elective I: (b) Softwa	SC1744	☑		☑		☑		To know the Software Engineering process.
201	Elective I: (c) Object Oriented Analysis and Design	SC1745	☑				☑		To understand the object models and designing skills.
202	Practical V: Web Pro	SC17P5	☑	Create program using Validation Controls			☑	Program using Navigation Controls	To design web pages.

No.	Course	Code							Objective
203	Practical VI: Oracle Lab	SC17P6					☑	Creating PL/SQL programs using Loops	To know about Database Management concepts.
204	Allied IV: Theory: Operations Research	SA1741	☑	Solving LPP solutions	☑	Solve Critical Path Method problems	☑	Solving Travelling Salesman Problem	To understand the problems related with Transportation, Assignment techniques.
205	SLC: Maya	SC17S2			☑	Creating Animation for scenery	☑	Creating Animation for any one cartoon character	To equip with the basic skills needed to create animations.
206	Major Core VIII: Web Technology	SC1751	☑	Demonstration on working with Tables	☑	Writing Mouse Events-Program	☑	Seminar on Element Type Declaration	To learn the basics of website creation.
207	Major Core IX: Operating Systems	SC1752	☑	Assign tasks to simulate and compare different scheduling algorithms like FCFS, Round Robin etc.	☑	Seminar on Paging	☑	Seminar on Deadlock Detection	To know about the features of Operating Systems.
208	Elective II: (a)Data Communication and Computer Networks	SC1753	☑	Asked students to explain Network Concepts, Protocols.	☑	Seminar on LAN, MAN	☑	Creating Models of layers in the OSI Model	To know about data communication protocols.
209	Elective II: (b) Data Mining	SC1754	☑				☑		To understand the Data Mining ideas.
210	Elective II: (c) Image Processing	SC1755	☑		☑		☑		To have a practice in processing images.
211	Practical VII: Web Technology Lab	SC17P7			☑	Webpage Creation using tags	☑	Ask to create web page using frames	To learn the basics of website creation.
212	Research Project	SC17PR					☑	Demonstration on Modules	To get the expected output.
213	Skill Based Course (*SBC): Photoshop	SSK175			☑	Working with Color Modes in Images	☑	Working with Retouching Tools in Images	To enhance images using advance editing tools to create magazine covers.
214	Major Core X: Android Application Development	SC1761	☑	Work with interactive UI widgets like buttons, text field, Checkbox etc.			☑	Develop a simple Android application	To know about the Android Operating system.
215	Major Core XI: Computer Graphics and Multimedia	SC1762					☑	Creating circle program using Bresenham's Circle Algorithm	To know the basics of graphics.
216	Major Core XII: UNIX and Shell Programming	SC1763	☑	Make to execute commands and work in vi Editor			☑	Demonstration using vi Editor	To know the working model of Unix OS.
217	Elective III: (a)Mobile	SC1764	☑	Seminar on GSM	☑	Seminar on Mobility in Wireless LAN	☑	Seminar on Security Models	To know the concepts behind Mobile Computing.
218	Elective III: (b)Client / Server Technology	SC1765			☑		☑		To know about the different computing paradigms.
219	Elective III: (c)Artificial Intelligence and Expert System	SC1766					☑		To know about the basics of Artificial Intelligence.
220	Practical VIII: Android Application Development Lab	SC17P8	☑	Develop a basic calculator app			☑	Develop a simple Android application	To know about the Android Operating system and its applications.
221	Practical IX: Computer Graphics and Multimedia Lab	SC17P9					☑	Creating Bouncing Ball program	To understand the graphical functions.
222	Skill Based Course (*SBC): Dreamweaver CS4	SSK176					☑	Image Editing Using Dreamweaver	To learn an Image Editing software.