DEPARTMENT OF COMPUTER SCIENCE
COURSE OUTCOMES OF UNDER GRADUATE PROGRAMMES
(2016 – 2017 onwards)

Name of the Programme: B.C.A.			Semester – I
Course Code	**Name of the Course**	**Course Outcomes**	
16SCCCA1	**PROGRAMMING IN C**	**CO 1**	Understand the various operator in C.
		CO 2	Understand the decision making for Branching and Looping.
		CO 3	Know arrays, arrays types, string handling functions
		CO 4	Know the concept pointers, fire handling, input output operations
		CO 5	Understand the Linked lists and Pre-processor
16SCCCA1P	**PROGRAMMING IN C (P)**	**CO 1**	To impart practical training in C Programming Language.
		CO 2	Understand the basic terminology used in computer programming.
		CO 3	Write, compile and debug programs in Language
		CO 4	Create programs involving decision structures, loops, strings and functions
		CO 5	Design programs involving structures and pointers

Name of the Programme: B.C.A.			Semester – II
Course Code	**Name of the Course**	**Course Outcomes**	
16SCCCA2	**PROGRAMMING IN C++**	**CO 1**	Understand the difference between object-oriented programming and procedural oriented language and data types in C++.
		CO 2	Program using C++ features such as composition of objects
		CO 3	Understand the concept of inheritance and classification, pointer's virtual function and polymorphism
		CO 4	Know the concept of function templates and exception handling
		CO 5	Competence in the use of object-oriented programming language in the development of small to medium sized application programs
16SCCCA2P	**PROGRAMMING IN C++ (P)**	**CO 1**	Use C++ to demonstrate practical experience in developing object-oriented solutions
		CO 2	Analyze a problem description, design and build object-oriented software using good coding practices and techniques
		CO 3	Implement an achievable practical application and analyze issues related to object-oriented techniques in the C++ programming language
		CO 4	Analyze problems and implement simple C++ applications using an object-oriented software engineering approach
		CO 5	Ability to isolate and fix common errors in C++ programs

Name of the Programme: B.C.A. **Semester – III**

Course Code	Name of the Course	Course Outcomes	
16SCCCA3	PROGRAMMING IN JAVA	CO 1	The students will have the competence in the use of Java Programming language
		CO 2	An understanding of the principles and practice of object-oriented programming in the construction of robust maintainable programs which satisfy the requirements
		CO 3	Able to understand classes and methods, array strings and vectors, interface concept instead of multiple inheritances
		CO 4	Packages of java, multithreaded programming contains synchronization, managing errors and exceptions handling
		CO 5	Able to perform applet programming designing HTML, graphic programming
16SCCCA3P	PROGRAMMING IN JAVA (P)	CO 1	Student should know the model of object-oriented programming and fundamental features of an object-oriented language
		CO 2	Student should know how to test, document and prepare a professional looking package for each business project
		CO 3	Student have the ability to write a computer program to solve specified problems and to use the Java SDK environment to create, debug and run simple Java programs
		CO 4	Student will be able to explain and develop programs for inheritance and multithreading
		CO 5	Student will be able to explain and develop programs for applets and exception handling
16SNMECA1	WORKING PRINCIPLES OF INTERNET	CO 1	To understand the working Principles of Internet
		CO 2	Underlying the basic concepts of Internet and communication through Internet
		CO 3	To acquire the knowledge in Common Internet Tools
		CO 4	Understand the Multimedia on Internet
		CO 5	To be aware of Safeguarding the Internet

Name of the Programme: B.C.A. **Semester – IV**

Course Code	Name of the Course	Course Outcomes	
16SCCCA4	DATABASE SYSTEMS	CO 1	Understand, appreciate and effectively explain the underlying concepts of database Technologies
		CO 2	Give an introduction about DBMS, data models, a schema, E-R diagram, relational database and benefits of database
		CO 3	Able to design a good database using normalization, decomposition and functional dependency
		CO 4	Normalize a database and populate and query a database using SQL DML/DDL commands
		CO 5	Understand the concepts of database architecture, client server architecture, parallelism concepts and distributed database concepts
16SCCCA4P	DATABASE SYSTEMS (P)	CO 1	Demonstrate an understanding of the relational data model
		CO 2	Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS
		CO 3	Formulate, using relational algebra, solutions to a broad range of query problems
		CO 4	Formulate, using SQL, solutions to a broad range of query and data update problems
		CO 5	Learn brief introduction to Structured Query Language
16SNMECA2	FUNDAMENTALS OF INFORMATION TECHNOLOGY	CO 1	To Provide the Basic Concepts in Information Technology
		CO 2	Develop the knowledge of working with Computers
		CO 3	Understand the basic Computer Software and also Database Management Systems
		CO 4	Understand the Computer Networks
		CO 5	Understand the applications of Computer Systems
16RSBE4:1	PAGE MAKER	CO 1	Introduction to various versions, concepts and applications of PageMaker
		CO 2	Working with various tools
		CO 3	Working with platters and various templates
		CO 4	Positioning ruler, typing text, basic formatting
		CO 5	Creating and opening publications

Name of the Programme: B.C.A. **Semester – V**

Course Code	Name of the Course	Course Outcomes	
16SCCCA5	DATA STRUCTURES & ALGORITHMS	CO 1	Able to walk through insert and delete for different data structures
		CO 2	Skill to analyze algorithms and to determine algorithm correctness and their time efficiency
		CO 3	Appreciate some interesting algorithms like Huffman, Quick Sort, and Shortest Path etc
		CO 4	Improve programming skills
		CO 5	Ability to implement algorithms to perform various operations on data structures
16SCCCA6	OPERATING SYSTEMS	CO 1	Understand the basic working process of an operating system
		CO 2	Ability to apply CPU scheduling algorithms to manage tasks
		CO 3	Knowledge of methods of prevention and recovery from a system deadlock
		CO 4	Understand the issues in synchronization and memory management
		CO 5	Compare performance of processor scheduling algorithms - produce algorithmic solutions to process synchronization problems
16SCCCA7	DIGITAL COMPUTER FUNDAMENTALS	CO 1	Convert different type of codes and number systems which are used in digital transmission and computer systems
		CO 2	Apply the codes and number systems converting circuits and compare different types of logic families which are the basic unit of different types of logic gates in the domain of economy, performance and efficiency
		CO 3	Skill to use the methods of systematic reduction of Boolean expression using K-Map
		CO 4	Understand and design adder, multiplexer etc
		CO 5	Understand the concepts of Boolean algebra
16SCCCA5P	COMPUTER GRAPHICS AND ANIMATION (P)	CO 1	Learn and implement Text editing, Image editing etc
		CO 2	Learn and implement basics of Multimedia & Animation
		CO 3	Work and create Multimedia Project with Adobe Flash
		CO 4	Work and create Multimedia Project with Adobe Photoshop
		CO 5	Learn about creation and execution of Multimedia project

16SMBECA1:2	**SOFTWARE ENGINEERING**	**CO 1**	Understand the importance of the stages in the software life cycle
		CO 2	Understand the various process models
		CO 3	Be able to design software by applying the software engineering principles
		CO 4	Verify and validate the problem of software programming
		CO 5	Maintain the quality of software project
16RSBE4:2	**COREL DRAW**	**CO 1**	Basic features of CorelDraw
		CO 2	Use of varies tools. Setting up drawing pages using ruler, grid and gridlines
		CO 3	Drawing and shaping object, drawing lines, curves, dimensions lines
		CO 4	Special effects to bitmaps by 3d
		CO 5	Working with style & templates
16RSBE4:3	**DREAMWEAVER**	**CO 1**	Use Adobe Dreamweaver to create personal and/or business websites following current professional and/or industry standards
		CO 2	Use critical thinking skills to design and create a basic, multi-page website
		CO 3	create a template and wireframe for a website
		CO 4	create links, add images to a web page, use tables for layout
		CO 5	use Dreamweaver help to research and describe role of W3C in advancing HTML and CSS
RUGSDC	**SOFT SKILLS DEVELOPMENT**	**CO 1**	Develop effective communication skills (spoken and written).
		CO 2	Develop effective presentation skills
		CO 3	Develop all-round personalities with a mature outlook to function effectively in different circumstances
		CO 4	Become self-confident individuals by mastering inter-personal skills, team management skills, and leadership skills
		CO 5	Develop broad career plans, evaluate the employment market, identify the organizations to get good placement, match the job requirements and skill sets

Name of the Programme: B.C.A.			Semester – VI
Course Code	**Name of the Course**	**Course Outcomes**	
16SCCCA8	**COMPUTER NETWORKS**	**CO 1**	Know the basic of network, network type's reference model and layers in network
		CO 2	Understand the routing algorithm and protocols that are used in network communication
		CO 3	Understand and implement the switching techniques
		CO 4	Learn about different layers and protocols present in those layers
		CO 5	Learn about IP -Addressing
16SCCCA9	**PROGRAMMING IN PHP**	**CO 1**	Understand process of executing a PHP-based script on a web server
		CO 2	Be able to develop a form containing several fields and be able to process the data provided on the form by a user in a PHP-based script
		CO 3	Understand basic PHP syntax for variable use, and standard language constructs, such as conditionals and loops
		CO 4	Design the colourful web pages according to their creativity
		CO 5	On successful completion of this course the students are able to develop the programs using PHP and MySQL
16SCCCA6P	**PROGRAMMING IN PHP (P)**	**CO 1**	Design the Webpages using hyper links
		CO 2	Use Frames and Framesets in their web page design
		CO 3	Manipulate tables with row span and Colum span
		CO 4	Design the colourful web pages according to their creativity
		CO 5	On successful completion of this course the students are able to develop the programs using PHP and MySQL
16SMBECA2:1	**CLOUD COMPUTING**	**CO 1**	Understand the basic about cloud computing
		CO 2	Learn about cloud computing architecture and types
		CO 3	Learn about cloud application platforms
		CO 4	Compare various cloud computing providers/ Software
		CO 5	Understand risks involved in cloud computing