S.NO	COURSE CODE	COURSE TITLE	COURSE OUTCOMES
1	1505302	Advanced Computer Architecture	1.Understand the variety of abstract data types and data structures
			2.Analyze data structures such as Stacks and Queues.
			3.Apply and analyze tree traversal algorithms and graph traversal algorithms.
			4.Organize data in order using heap sort algorithm.
			5.Ability to understand the concept of Hashing, B-Trees and B+-Trees.
2	1505303	Digital Logic Design	1.Recall Binary Number systems
			2.Understand Boolean algebra and apply to the Boolean functions.
			3.Apply different optimization techniques to construct effective logic circuit.
			4.Model combinational and sequential circuits.
			5.Illustrating different registers, counters, Memory Concepts.
	1505304	Discrete Mathematics	1.Demonstrate knowledge on mathematical logic and Analyze truth tables, normal forms,implications, rules of inference
			2.Understand the basic principles of mathematical objects such as sets, relations
			3.Understand Algebraic structure, monoids , semi groups,groups.
			4.Apply basic counting techniques to solve combinatorial problems.
			5.Demonstrate different traversal methods for trees and graphs
	1525305	Managerial Economics & financial analysis	1.Acquire knowledge in principles and concepts of Managerial Economics and Accountancy
			2.Understand the Economic theories i.e., Demand, Production, Cost, Markets and Price.
			3.Describe different types of Markets and competition, forms of organization and Methods of Pricing.

COMPUTER SCIENCE ENGINEERING

Course Outcomes   R-15

			4.Examine the profitability of various Projects.
			5.Utilize tools and techniques to analyze and interpret the key parameters of financial performance.
	1505404	Formal Languages & Automata Theory	1.Demonstrate knowledge on Formal languages and automata
			2.Analyze the classification of languages, automata's and their computing power.
			3.Design grammars and automata (recognizers) for regular expressions and formal languages.
			4.solve to the computational problems using Push Down automata
			5.Apply Turing Machine to solve computational problems
	1505406	Computer Organization	1.Understand the organization of the control unit, Arithmetic unit, Logical unit, Memory unit and the I/O unit.
			2.Ability to analyze the concept of various microoperations.
			3.Recall arithmetic operations of binary number system.
			4.Ability to analyze memory and I/O devices effectively and to explore the hardware requirements for cache memory ad virtual memory and understand the concept of I/O organization.
			5.Illustrate the concept of pipelining and multiprocessors
	1505307	Object Oriented Programming & Data structures lab	1.Understand and implement OOP concepts like class, inheritance, polymorphism, constructor, destructor and friend function
			2.Understand and implement Stack ADT and Queue ADT using arrays and linked list.
			3.Choose and identify the appropriate data structure for given problem.
			4.Organize data in order using various sorting techniques.
			5.Analyze and apply right searching strategy for a sequence of elements.

		1505501	WEB TECHNOLOGIES	1.Define web server and installations of various web servers.
				2.Understand the scripting languages HTML, CSS, Java Script and create static web pages.
				3.Interpret the server side scripting PHP and create dynamic web pages.
				4.Outline the advanced concepts of PHP and design web pages to authenticate users.
				5.Develop server side programs using PHP and accessing database through PHP.
		1505502	COMPUTER NETWORKS	1.Understand the terminology and concepts of the OSI reference model and TCP-IP.
				2.Describe the functions of Data link layer and its protocols.
				3.Classifying the different routing algorithms and IP addressing with network layer.
				4.Understand connection establishment and services provides by TCP and UDP.
				5.Explain the working of DNS and World Wide Web.
		1505503	SOFTWARE ENGINEERING	1.Understand and Demonstrate basic knowledge in Software Engineering.
				2.Identify Requirements, Analyze and prepare models.
				3.Understand and develop design in different Contexts i.e Architecture, Component and User Interface.
				4.Demonstrate different Software Testing strategies.
				5.Understand the concepts of Software Project Management, Risk Management, and Software maintenance.
		1505504	COMPILER DESIGN	1.Understand and analyze the various phases of Compiler.
				2.Identify the tokens using lexical analyzer techniques.
				3.Categorize and implement parsing techniques.
				4.Understand syntax directed definition and develop type checking semantics using synthesized and inherited attributes.

			5.Understand the storage allocation and intermediate code representations.
			6.Summarize the code optimize techniques and demonstrate code generation technique and concepts.
	1505505	ADVANCED COMPUTER ARCHITECTURE (CBCC-I)	1.Understanding Parallelism and Parallel architectures.
			2.Remembering System interconnection Architectures.
			3.Analyzing Principles of scalable performance.
			4.Understanding about different concepts related to Pipelines.
			5.Ability to use Thread level parallelism
	1505509	WEB TECHNOLOGIES LAB	1.Design static web pages using HTML, CSS and Java Script.
			2.Create dynamic web pages using PHP and Java Script.
			3.Design web pages to authenticate users using Cookies.
			4.Develop server side programs using PHP and accessing database through PHP.
	1524510	Advanced English Communication Skills Lab	1.Describe Speaking and listening skills
			2.Understand various kinds of reports and present them schematically
			3.Analyze Behavioural skills
			4.Illustrate various employability skills required for the employment
			5.Classify the verbal and non-verbal communication
	1505601	Object Oriented Analysis & Design	1.Understanding the principles of modeling, object oriented modeling and benefits of each.
			2.Identify, analysis and model structural and behavioral concepts of the system.

			3.Design application and document them using UML diagrams (Class diagrams, Object diagrams, Use case diagrams, Activity diagrams and Interaction diagrams).
			4.Analyze and compare advanced classes and relationships.
			5.Apply the concepts of architecture design for deploying the code for software.
	1505602	Design & Analysis of Algorithms	1.Prove the correctness and analyze space and time complexity of an algorithm.
			2.Apply the algorithms to solve the problems
			3.Understand different algorithm design strategies and apply to real time problems.
			4.know the limitations of various design strategies.
	1505603	Cryptography & Network Security	1.Students will be able to understand security and mathematic concepts behind the cryptographic algorithms.
			2.Students will be able to explain basic concepts and algorithms of cryptography, including encryption/decryption and hash functions.
			3.Students will be able to describe various network security practice applications.
			4.Students will be able analyze protocols for various security objectives with cryptographic tools
			5.Students will be able to evaluate the role played by various security mechanisms like passwords, access control mechanisms, firewalls etc
	1505604	Data Mining	1.: Understand the importance of data mining, principles of business intelligence and prepare the data needed for data mining using pre-processing techniques.
			2.Organize the classification problem with different classifiers and performance of a classifier.
			3.Understand data mining classification technique using classifiers.
			4.Implement market based analysis using association rule mining.

			5.Analyze unsupervised clustering algorithms.
	1505605	MOBILE APPLICATION DEVELOPMENT	1. To Understand fundamentals of android operating systems.
			2.To learn the internals of the Android OS.
			3.To learn the Mobile application development using the Android SDK.
			4.To learn GUI Components and Resources in Android.
			5.To Learn SQLite Database.
	1505606	Machine Learning	1.Recall the basic concepts of decision trees and neural networks.
			2.Apply machine learning algorithms to solve problems of moderate complexity.
			3.Compare and contrast various machine learning algorithms along with their strengths and weaknesses.
			4.Understand the basic concepts of deep learning models.
	1505608	Unix & Shell Programming	1. Understand UNIX architecture and get familiar with unix environment and recall the buffer cache
			2.Understand data structure, algorithms and system calls that provides user interface to the file system
			3.Understand the context of process with system calls that manipulates and control process context.
			4. Work with UNIX utilities and to develop shell script.
			5. Study various inter process communication methods and understand the concept of Multi processor system.
	1505609	UML & Data Mining Lab	1.Recall basic concepts of Data mining and UML
			2.Demonstrate the use of Weka tool and visual paradigm.
			3.Awareness of various performance metrics of evaluation of data mining techniques.

			4. Find solutions to the problems using object oriented approach.
			5.Design a application from any suitable domain by incorporating all the core concepts.
	1505609	Mobile Application Development Lab	1.To Understand fundamentals of android operating systems.
			2.Illustrate the various components, layouts and views in creating android applications.
			3.To understand fundamentals of android programming
			4.To Learn menus and action bars in android.
	1505701	BIG DATA TECHNOLOGIES	1.Analyze the Bigdata characteristics
			2.Make use of HDFS interfaces to read and write files
			3.Analyze the data with MapReduce classes
			4.Build the development environment of Hadoop to run the job on local job runner and on a cluster
			5.Summarize the database applications of Hadoop
	1505702	Cloud Computing	1.Recall different computing paradigms
			2.Understand the evolution of cloud computing paradigm and its architecture
			3.Explain and characterize different cloud deployment models and service models
			4.Understand programming models and API's in Cloud Computing
			5.Identify the Data Center environment and service providers in cloud computing
	1505703	ARTIFICIAL INTELLIGENCE	1.Categorize the goals of AI, approaches to and progress toward those goals.
			2.Analyze various AI Search Algorithms.
			3.Represent knowledge of the world using Logic and Infer new facts from that knowledge.
			4.Demonstrate working knowledge of reasoning in the presence of incomplete and/or Uncertain information

			5.Apply Slot- and –Filler Knowledge Representation, Reasoning to real time problems.
			6.Analyze current trends addressing artificial intelligence.
	1505704	SOFTWARE TESTING	1.Recall Software Testing
			2.Compare various Terminologies used in Software Testing.
			3.Understand various testing methodologies like Path Testing, Domain Testing, Logic based Testing and Tools (Winrunner testing Tool)
			4.Construct various graphs useful in Software Testing like Flow Graph, State Graph.
			5.Examine various testing strategies and categorize them.
	1505705	COMPUTER GRAPHICS (CBCC-III)	1.Classify CRT, Color CRT, DVST, Flat Panel display devices and Graphical Input Devices.
			2.Understand DDA, Bresenhams line drawing algorithms and Midpoint circle generating algorithms, clipping of polygons
			3.Analyze the importance of viewing, projections and apply color models in computer graphics
			4.Analyze the illumination models, shading models and types of animations
	1505706	MOBILE COMPUTING (CBCC-III)	1.Interpret the basics of mobile computing
			2.Apply various controls to access medium like SDMA,FDMA,TDMA,AND CDMA.
			3.Analyze various telecommunication system like GSM,GPRS.
			4.Identify the different networks like mobile network and wiressLAN.
			5.Demonstrate the functionality of mobile IP,TCP and its improvements.

	1505707	NATURAL LANGUAGE PROCESSING (CBCC-III)	1.Summarize all the fundamentals required for Computational Linguistics.
			2.Analyze Parsing and resolve Ambiguity.
			3.Interpret Context and Free Grammars for Language Specifications.
			4.Illustrate intelligent agents for real time problems
	1505708	INTERNET OF THINGS	1.Demonstrate knowledge on Protocols, functional blocks and communication models of Internet of things.
			2.Identify domain specific IoT's
			3.Design appropriate solutions for IoT applications
			4.Apply logical techniques using python
			5.Use advances in IoT technology to design and
	1505709	SOFTWARE TESTING LAB	1.Demonstrate the working programming constructs like if..else, Switch, for, While, do-while.
			2.Illustrate test cases for real time applications
			3.Understand Winrunner Testing Tool.
	1505710	INTERNET OF THINGS LAB	1.Understand the basics of Internet of Thing
			2.Demonstrate Python and Eclipse background
			3.Develop basic programs in python
			4.Infer knowledge of Arduino IDE & Arduino Boards
			5.Summarize on Raspberry Pi
	1505801	Software Project Management	1.Understand the software Development life cycle and software economics.
			2.Estimate project cost and perform cost-benefit evaluation among projects.
			3.Apply schedule and cost control techniques for project monitoring including contract management.
			4.Apply quality models in software projects for maintaining software quality and reliability.

			5.Perform project management using project profiles and software economics.
	1505802	Ethical Hacking	1.Review the hacking and discuss the information gathering tools.
			2.Demonstrate the scanning and enumeration techniques.
			3.Describe the system hacking tools.
			4.Remembering the programming fundamentals.
			5.Discuss the penetration testing.
	1525803	Management Science	1.Know the principles and functions of management
			2.Understand the various concepts, approaches and theories of management in the real situation.
			3.Compare and contrast organization structure designs and charts diligently with theoretical learning concepts
			4.To be aware of the role, functions and functioning of human resource department of the organizations.
			5.Identify the elements of Operations management and develop PERT/CPM Charts for projects of an enterprise and estimate time & cost of project.
			6.Analyze the concept of strategic planning and implementation and apply on the decisions in strategic management.
	1505804	Digital Image Processing	1.Understand the basic concepts of Digital image properties and data structures for image analysis.
			2.Understand the concepts of Image preprocessing and Image restoration.
			3.Analyze the concepts of Color models and color transformations.
			4.Understand the concepts of Segmentationand learn about Line detection and Edge detection.
			5.Analyze the concepts of Image transformation and Image data compression.

	1505805	Social Network Mining and Analysis	1.Understand the basic components of social networks
			2.Analyze fundamental concepts of semantic web
			3.Understand and apply various algorithms regarding mining social media data
			4.Understand privacy issues in social media data
			5.Apply social media data to extract meaningful information
			6.Implement mining algorithms for social media data
	1505806	Soft Computing	1.Evaluate various techniques of soft computing.
			2.Describe Genetic Algorithms
			3.Demonstrate machine learning through neural networks.
			4.List the facts and outline the different process carried out in Fuzzy Logic.
			5.Discuss Neuro -Fuzzy models.