VISION MISSION OF THE DEPARTMENT

VISION OF THE DEPARTMENT

- Producing professionals and entrepreneurs with strong morals and ethics by strengthening students with content and skills of emerging technologies in Computer Science and Engineering for our nation building.

MISSION OF THE DEPARTMENT

M1: To lay solid foundation to acquire skills in developing software by research and innovation.

M2: To impart leadership qualities in the fields of their choicest interest and produce socially responsible engineers in this digitalized Society.

B.TECH

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

PEO-1: To prepare students to identify, formulate and solve critical Computer Science and Engineering problems.

PEO-2: To impart professional skills by training students for immediate employment and enlighten them about higher studies in Computer Science and Engineering and other related disciplines.

PEO-3: To strengthen students with leadership qualities along diverse career paths.

PEO-4: To develop interest in inter disciplinary studies and prepare them to apply the skills to solve the social and human problems.

B.TECH

Program Outcomes (POs):

The following program outcomes are expected to be found in the graduate students on their completion of the 4-year program.

PO-1: Engineering Knowledge: An ability to apply knowledge of mathematics, computing, science, electrical and electronics engineering.

PO-2: Problem Analysis: Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO-3: Design / Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

PO-4: Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-5: Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO-6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO-7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO-9: Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-10: Communication: Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO-11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO-12: Life-Long Learning: Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO-1: Enable students with ability to understand the concepts of Computer Science and Engineering and practice them on various Software tools.

PSO-2: Prepare students to build innovative solutions as per the societal needs to improve living standards.

PSO-3: Enable students to take right decisions to pursue higher studies at reputed academic institutions for better employment/further research/entrepreneurship.

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) : DATA COMMUNICATIONS AND COMPUTER NETWORKS (B18CS14)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Illustrate basic computer network technology.			
2	Identify the different types of network topologies and protocols.			
3	Categorize the hardware and software commonly used in data communications and networking.			
4	Interpret Design and Evaluate subnet masks and addresses to fulfill networking requirements.			
5	Analyze the features and Operations of TCP/UDP, FTP, HTTP, SMTP,SNMP etc.			
Course Outcome	Year / semester V Sem	Subject Name (Subject Code): COMPILER DESIGN (B18CS15)	No. of Hours L: 3 T: 1 P:0	Credits:4
After the completion of this course, the students should be able to				
1	Apply the knowledge of modern phases of compiler and its features.			
2	Identify the similarities and differences among varies parsing techniques.			
3	Explain semantic analysis in the context of the compilation process.			
4	Design a symbol table format for the language defined by a grammar			
5	Analyze the code generation algorithm.			
Course Outcome	Year / semester V Sem	Subject Name (Subject Code): SOFTWARE ENGINEERING (B18CS16)	No. of Hours L: 3 T: 0 P: 0	Credits:3
After the completion of this course, the students should be able to				
1	Define Software Engineering and listing core principles of software engineering and analyse various process models			
2	Explain personal software process and team software process.			
3	Differentiate the techniques of Verification and Validation in the process of software development.			
4	Apply the testing strategies for various programming codes.			
5	Develop a Software Quality Assurance Plan for a Software Development			
Course Outcome	Year / semester V Sem	Subject Name (Subject Code) MACHINE LEARNING(B18CS17)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Explain the theory underlying machine learning.			
2	Learn beyond binary classification.			
3	Recognize and implement various genetic algorithms.			
4	Construct algorithms to learn tree, to learn linear, non-linear models and rule-based models.			
5	Implement Probabilistic models. Learn basics of reinforcement learning.			

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) PRINCIPLES OF PROGRAMMING LANGUAGES (PROFESSIONAL ELECTIVE-I) (B18CS18)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Analyze Syntax related concepts including context free grammars, Attribute Grammar parse trees.			
2	Perceive the semantic issues associated with function implementations.			
3	Perceive the concepts of Abstraction and Encapsulation constructs of classes, interfaces, packages of various Language Examples.			
4	Perceive the implementation of object oriented languages.			
5	Compare the Functional Programming Languages and Logic Programming Languages.			
Course Outcome	Year / semester : V Sem	Subject Name (Subject Code) COMPUTER GRAPHICS (PROFESSIONAL ELECTIVE-I) (B18CS19)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Get overview on applications areas of Computer Graphics, Graphic devices and Monitors.			
2	Learn about basic tools for constructing pictures with straight lines, methods for performing geometric transformations i.e 2-Dimensional, curves, filled area, celNo.of Hours L: array patterns, and text.			
3	Learn about various surface functions such as quadrics, polygon surfaces, super quadrics, splines or blobby objects and 3-Dimensions transformations in computer graphics.			
4	Describe the importance of viewing. Learn major considerations in the generation of realistic graphic displays, detecting visible surfaces in a 3-Dimension scene and designing animation sequences.			
5	Discuss the applications of computer Graphics. Analyze the fundamentals of animations			
Course Outcome	Year / semester V Sem	Subject Name (Subject Code) MOBILE APPLICATION DEVELOPMENT (PROFESSIONAL ELECTIVE-I) (B18CS20)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Student understands the working of Android OS Practically.			
2	Ability to evaluate and select appropriate solutions to the mobile computing platform.			
3	Ability to develop the user interface.			
4	Ability to work with SQLITE DB.			
5	Student will be able to develop, deploy and maintain the Android Applications.			
Course Outcome	Year / semester V Sem	Subject Name (Subject Code) INTELLECTUAL PROPERTY RIGHTS (OPEN ELECTIVE-I) (B18MB06)	No. of Hours L: 3 T: 0 P:0	Credits:3
After the completion of this course, the students should be able to				
1	Understand the legal rights related to design, trade and unfair competition.			
2	Ability to apply and assess principles in intellectual property.			
3	Discuss the real time areas related to semiconductor chip protection act.			

4	Develop different law of patents.
5	Introduce trade secret and apply state law and trade secret law.

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) DISASTER MANAGEMENT (OPEN ELECTIVE-I) (B18CE53)	No. of Hours L: 3 T: 0 P: 0	Credits:3
After the completion of this course, the students should be able to				
1	Perceive the various types of disaster.			
2	Interpret the various types of Hazards and Vulnerability.			
3	Perceive different approaches of disaster risk reduction.			
4	Describe the disaster management and safety plan.			
5	Discuss the various disaster risks in India..			

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) (MANAGEMENT SCIENCE(OPEN ELECTIVE –I) B18MB02)	No. of Hours L: 3 T: 0 P: 0	Credits:3
After the completion of this course, the students should be able to				
1	Outline the fundamentals of management and contributions to management.			
2	Define the social Responsibilities of an organization towards stakeholders and build the suitable organization structure and to identify factors influencing plant location and layout decisions.			
3	Know importance of materials management, evaluate quality of products using SQC techniques and Identify the basic concepts of marketing mix and Human Resource concepts.			
4	Know how PERT and CPM different and to construct network by proper planning organizing an managing the efforts to accomplish a successful project.			
5	Appraise all contemporary management practices and analyze how these contemporary management practices one applicable in modern business and service organizations.			

Course Outcome	Year / semester V Sem	Subject Name (Subject Code): COMPUTER NETWORKS AND COMPILER DESIGN LAB (B18CS21)	No. of Hours L: 0 T: 0 P:3	Credits:1.5
After the completion of this course, the students should be able to				
1	Create any topology using network devices and build a device for sharing on network.			
2	Explain the major software and hardware technologies used on computer networks.			
3	Demonstrate a working process of lexical analysis, parsing and other compiler design aspects.			
4	Interpret the working of lex and yacc compiler for debugging of programs.			

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) MACHINE LEARNING LAB (B18CS22)	No. of Hours L: 0 T: 0 P:3	Credits:1.5
After the completion of this course, the students should be able to				
1	Discuss different application on Machine Learning problems.			
2	Describe various algorithms on Machine Learning mentioning its strengths and weaknesses.			

3	Improve the performance of Machine Learning algorithms with different parameters.
4	Understand the latest issues raised by current researchers.

Course Outcome	Year / semester V Sem	Subject Name (Subject Code) INDIAN CONSTITUTION (B18MC04)	No. of Hours L: 2 T: 0 P: 0	Credits: 0
After the completion of this course, the students should be able to				
1	Demonstrate the fundamental rights and duties of a citizen			
2	Classify the administrative structure of the Indian union			
3	Identify the power of state government and make use of positions			
4	Categorize the various department and local administrations responsibilities			
5	Functions of election commission and its roles			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) NETWORK PROGRMMING (B18CS23)	No. of Hours L: 3 T: 0 P:0	Credits: 3
After the completion of this course, the students should be able to				
1	Demonstrate advanced knowledge of OSI layers, TCP & UDP concepts, Networking.			
2	Summarize the TCP socket functions and Byte Ordering.			
3	Make use of TCP client server applications and analyze I/O Multiplexing and socket options.			
4	Define about the Elementary UDP sockets and Address conversions.			
5	Explain inter process communication consisting of pipes, FIFOs, Semaphores, Message Queues and Remote Procedure Calls			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code SOFTWARETESTING (B18CS24)	No. of Hours L: 3 T: 0 P:0	Credits: 3
After the completion of this course, the students should be able to				
1	List a range of different software testing techniques and strategies and be able to apply specific (automated) unit testing method to the projects.			
2	Distinguish characteristics of structural testing methods.			
3	Demonstrate the Domain testing and Interface Testing			
4	Perceive software testing topics, such as logic based testing methods, KV charts, challenges, and solutions.			
5	Distinguish good & bad state graphs.			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) DATA WAREHOUSING AND DATA MINING (B18CS25)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Introduce data mining concepts and develops understanding of data mining application.			
2	Develop an understanding of data warehouse, designing and using data in data warehouse using various operations.			
3	Develop an outlook of Association rule mining, association rule mining methods and their application on some sample data sets, evaluate these methods based on need.			

4	Develop an understanding of classification and prediction, classification methods and their application on some sample data sets, evaluate these methods based on need.
5	Develop conceptual understanding of clustering, various clustering methods and their application on some sample data sets, evaluate these methods based on need

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) WEB SERVICES (B18CS26)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Implement Web service client and server with interoperable systems like core distributed computing, J2EE, SOA, WSDL, UDDI and EBXML			
2	Perceive and analyze the principles of SOAP.			
3	Perceive the implement Web Services life cycle, Anatomy of WSDL definition document.			
4	How to utilize the semantics of web services. Working with UDDI, programming with UDDI, UDDI data structures.			
5	Explore interoperability between different frameworks. Design web based applications that use web services			

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) (ADVANCED DATABASE MANAGEMENT SYSTEMS (PROFESSIONAL ELECTIVE-II) B18CS27)	No. of Hours L: 3T: 0 P: 0	Credits:3
After the completion of this course, the students should be able to				
1	Define Database Languages, Models along with Client Server Architecture.			
2	Explain principles of Database Recovery protocols.			
3	Construct EER model for real world problems.			
4	Determine various database security issues.			
5	Adapt with advanced Data models and its applications.			

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) DESIGNPATTERNS (PROFESSIONAL ELECTIVE-II) (B18CS28)	No. of Hours L: 3 T: 0 P: 0	Credits:3
After the completion of this course, the students should be able to				
1	Identify the appropriate design patterns to solve object oriented design problems.			
2	Identify and implement appropriate solutions to recurring programming problems by consulting technical documentation and specifications, including design pattern catalogs and existing source code.			
3	Develop design solutions using creational patterns.			
4	Apply structural patterns to solve design problems.			
5	Summarize the advantages and disadvantages of using design pattern variants			

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) OPEN SOURCE SOFTWARE (PROFESSIONAL ELECTIVE-II) (B18CS29)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Install and run open-source operating systems.			

2	Gather Information about free and open source software projects from software releases and from sites on the internet.
3	Build and modify one or more free and open source software packages.
4	Ability to learn version control system and interface with version control systems used by development communities.
5	Contribute software to and interact with free and open source software development Projects.

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) AIR POLLUTION CONTROL (OPEN ELECTIVE – II) (B18CE52)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Perceive Air pollution Concepts.			
2	Analyze the Effects of air pollution on the environment.			
3	Identify the significance of meteorological factors in pollutant dispersion and to predict the pollutant concentration.			
4	Apply plume dispersion modeling and assess the concentrations.			
5	Perceive Air quality monitoring devices.			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) BIOMEDICAL INSTRUMENTAION (OPEN ELECTIVE – II) (B18EC23)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Understand the functions of bio amplifiers, characteristics of medical instruments and bio signals.			
2	Discuss the various internal, external Bio electrodes and relations between electrical and mechanical activities of heart.			
3	Compare various concepts of Cardiac Instrumentation and gain the knowledge about			
4	Analyze the Therapeutic Equipment and their operation.			
5	Acquires knowledge about neuro-muscular Instrumentation like ECG EMG and EEG.			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) DIGITAL IMAGE PROCESSING (OPEN ELECTIVE – II) (B18EC24)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Gain the knowledge of digital image fundamentals and image transforms.			
2	Discuss the analysis of image enhancement in spatial and frequency domain.			
3	Understand the different methods to restore an image.			
4	Inspect different image segmentation techniques and understand morphological image processing.			
5	Analyze the different image compression techniques.			
Course Outcome	Year / semester III YEAR IISem	Subject Name (Subject Code) ADVANCEDENGLISH COMMUNICATION SKILLS LAB(B18EN03)	No. of Hours L: 0 T: 0 P: 3	Credits:1.5

After the completion of this course, the students should be able to	
1	Developing effectively and appropriate vocabulary to be used contextually.
2	Inculcating flair for Writing and felicity in written expression.
3	Enhancing job prospects.
4	Acquiring effective speaking abilities
5	Developing effectively and appropriate vocabulary to be used contextually.

Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) NETWORK PROGRMMAING LAB (B18CS30)	No. of Hours L: 0 T: 0 P: 3	Credits:1.5
After the completion of this course, the students should be able to				
1	Elaborate basic UNIX commands, shell scripts and AWK scripts.			
2	Organize and manipulate files and directories.			
3	Model TCP and UDP client server applications and outline the I/O multiplexing conceptsof Select and Poll functions.			
4	Design inter process communication consisting of pipes, FIFOs, Semaphores and message Queues and develop RPC applications.			
5	Elaborate basic UNIX commands, shell scripts and AWK scripts.			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) DATAMININGAND SE LAB (B18CS31)	No. of Hours L: 0 T: 0 P:3	Credits: 1.5
After the completion of this course, the students should be able to				
1	Develop a design of data warehouse and implement OLAP operations.			
2	Explore WEKA for data mining task such as association rule mining, classification and clustering using a few algorithms from the respective task.			
3	Explore text mining using WEKA and apply classification using Naive bayes technique.			
4	Will have experience and/or awareness of testing problems and will be able to develop a simple testing report.			
Course Outcome	Year / semester VI Sem	Subject Name (Subject Code) LOGICAL REASONING & QUANTITATIVE ANALYSIS (B18MC05)	No. of Hours L: 2 T: 0 P:0	Credits: 0
After the completion of this course, the students should be able to				
1	Apply quantitative reasoning and mathematical analysis methodologies to understand and solve problems.			
2	Interpret given information correctly, determine which mathematical model best describes the data.			
3	Correctly apply mathematical language and notation to explain the reasoning underlying their conclusions			
4	Improve their mathematical skills in various general aspects to solve real world problems.			
5	Ability to draw conclusions or make decisions based on logical reasoning and mathematical ability.			
Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) NETWORK SECURITY & CRYPTOGRAPHY (B18CS32)	No. of Hours L: 3 T: 0 P: 0	Credits: 3

After the completion of this course, the students should be able to	
1	Identifies various types of vulnerabilities, attacks, mechanisms and security services.
2	Compare and contrast symmetric and asymmetric encryption algorithms.
3	Implementation of message authentication, hashing algorithms and able to understand Kerberos.
4	Explore the attacks and controls associated with IP, transport level, web and E-mail security.
5	Develop intrusion detection system, solutions for wireless networks and designing of various types of firewalls.

Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) MANAGEMENT AND ORGANISATIONAL BEHAVIOR(B18MB04)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Evolution of Management and contribution of Management thinkers			
2	The relevance of environmental scanning, planning and to take decisions.			
3	Organizing and controlling			
4	Individual and group Behavior			
5	Leadership and Motivation.			
Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) CLOUD COMPUTING (B18CS33)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Perceive the main concepts, key technologies of virtualization			
2	Describe the architecture and infrastructure of cloud computing with all services of cloud and deployment models			
3	Analyze the issues of cloud computing like cloud security. Explain the core issues of cloud computing such as security and privacy			
4	Identify problems; analyze various cloud computing solutions using python. Write comprehensive case studies by analyzing different cloud computing solutions			
5	Perceive the virtualization and cloud computing concepts. Develop scalable applications using AWS.			
Course Outcome	Year / semester VII Sem	Subject Name (Subject Code INFORMATION SYSTEMS AND AUDITING (B18CS34)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Recognize the propensity of errors and remedies in processes involving Information Technology.			
2	A consummate knowledge of risks and controls in IT operations in Industry.			
3	Apply the information systems auditing methodology. Identify and manage the security controls.			
4	Provide protective IT security guidelines for various types of Industries. Analyze the current issues in auditing			
5	The necessary wherewithal to become an IS Auditor and/or Security specialist eventually. Evaluate asset safeguarding and data integrity, system effectiveness and system efficiency.			

Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) ARTIFICIAL INTELLIGENCE (B18CS35)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Remember various AI concepts like the AI technique, level of model, there underlying assumptions etc			
2	Perceive the concepts of AI search techniques. Solve various problems by applying search methods.			
3	Apply knowledge Representation techniques. Analyze different structures of representation			
4	Evaluate AI search techniques. Analyze different Planning Techniques			
5	Create Expert systems.			

Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) SOFT COMPUTING (B18CS36)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Learn basics of artificial neural network and soft computing techniques.			
2	Perceive various supervised learning networks and training algorithms of various Associative memory networks			
3	Perceive the algorithms for pattern association unsupervised learning networks, Special networks.			
4	Apply functional mappings in fuzzy sets. Interpret the Scope of Membership functions and perceive defuzzification methods and discussions on concepts of fuzzy sets			
5	Analyze and comprehends the concepts and applications of genetic algorithms, various soft computing techniques for problem solving			
Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) BUSINESS INTELLIGENCE AND BIG DATA (B18CS37)	No. of Hours L: 3 T: 0 P:0	Credits: 3
After the completion of this course, the students should be able to				
1	Explain the foundations, definitions, and capabilities of DSS, data analytics and BI.			
2	List the definitions, concepts, and architectures of data warehousing.			
3	Demonstrate the impact of business reporting, information visualization, and dashboards. Outline the definitions, concepts, and enabling technologies of big data analytics.			
4	Explain data mining, neural networks, support vector machines, text analytics, text mining, sentiment analysis, web mining, web analytics, social analytics, social network analysis.			
5	Apply big data technologies in business intelligence using geospatial data, location-based analytics, social networking, Web 2.0, reality mining, and cloud computing.			
Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) SOFTWARE PROJECT MANAGEMENT (B18CS38)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Gain knowledge of software economics, phases in the life cycle of software development, project organization, and project control and process instrumentation.			
2	Summarize software economics, software development life cycle, artifacts of the process, workflows, checkpoints, project organization and responsibilities, project control and process instrumentation.			

3	Choose the right software development approach. Compare various project organizations and responsibilities.			
4	Analyze the major and minor milestones, artifacts and metrics for management and technical perspective.			
5	Design software product using conventional and modern principles of software project management			
Course Outcome	**Year / semester VII Sem**	**Subject Name (Subject Code) NANO TECHNOLOGY (B18ME25)**	**No. of Hours L: 3 T: 0 P: 0**	**Credits: 3**
After the completion of this course, the students should be able to				
1	Know the importance of nano scale, types and their properties.			
2	Identify quantum mechanical phenomenon in two and three dimensional confinements.			
3	Understand the applications of carbon nano structures.			
4	Differentiate nano scale characterization techniques.			
5	Categorize nano devices and other devices.			

Course Outcome	**Year / semester VII Sem**	**Subject Name (Subject Code) ENTREPRENEURSHIP DEVELOPMENT (B18MB03)**	**No. of Hours L: 3 T: 0 P: 0**	**Credits: 3**
After the completion of this course, the students should be able to				
1	Define the nature and Qualities of Entrepreneur and relate to types of ownership.			
2	What are risk Reduction, market scope and Imitation strategies.			
3	Explain the legal regulations system and IPRs and summarize the source of finance from different institutions.			
4	Identify the needs of business ethics and develop the principles.			
5	Evaluate the issues of corporate governance and interpret the guidelines. Elaborate the concept of social responsibility and improve professional ethics			
Course Outcome	**Year / semester VII Sem**	**Subject Name (Subject Code) EMBEDDED SYSTEMS (B18EC31)**	**No. of Hours L: 3 T: 0 P: 0**	**Credits:3**
After the completion of this course, the students should be able to				
1	Explain the different embedded system design techniques and the metrics or challenges in designing them.			
2	Understand the complete architecture of 8051 and Advanced Processor.			
3	Demonstrate Software programming in Assembly language and High Level Language.			
4	Classify the different Real Time Operating System (RTOS), RTOS Vx Works, Windows CE.			
5	Understand the Embedded Software Development Process and Tools and Perform testing on Testing on Host Machine, Simulators, Laboratory Tools			
Course Outcome	**Year / semester VII Sem**	**Subject Name (Subject Code) MINI PROJECT & INTERNSHIP (B18CS46)**	**No. of Hours L: 0 T: 0 P: 0**	**Credits: 2**
After the completion of this course, the students should be able to				
1	Perceive, plan and execute a mini project as an individual or in a team in development of mini project			
2	Prepare a technical report based on the Mini project.			

3	As a team student can organize, record and compile their work done throughout the project in an efficient manner.
4	Develop effective communication skills for presentation of mini project related activities
5	Demonstrate technical seminar based on the Mini Project work carried out.

Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) NETWORK SECURITY & CRYPTOGRAPHY LAB (B18CS39)	No. of Hours L: 0 T: 0 P: 3	Credits:1.5

After the completion of this course, the students should be able to

1	Implement the cipher techniques.
2	Apply the mathematical foundation required for various cryptographic algorithms.
3	Develop the various security algorithms.
4	Use different open source tools for network security and analysis.

Course Outcome	Year / semester VII Sem	Subject Name (Subject Code) HUMAN VALUES AND PROFESSIONAL ETHICS (B18MC09)	No. of Hours L: 2 T: 0 P: 0	Credits: 0

After the completion of this course, the students should be able to

1	Perceive the importance of ethics and values in life and society.
2	Develop moral responsibility and mould them as best professionals.
3	Create ethical vision and achieve harmony in life.
4	Provide a critical perspective on the socialization of men and women.
5	Perceive the important issues related to gender in contemporary India

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) INTERNET OF THINGS (IOT) (B18CS40)	No. of Hours L: 3 T: 0 P: 0	Credits: 3

After the completion of this course, the students should be able to

1	Interpret the vision of IOT from global context.
2	Perceive building blocks of Internet of Things and its characteristics.
3	Learn the basic concepts of Python. Implement the python programming using Raspberry.
4	Perceive the application areas of IOT. Realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
5	Determine the Market perspective of IOT. Develop Python web applications and cloud servers for IOT.

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) ADVANCED OPERATING SYSTEMS (B18CS41)	No. of Hours L: 3 T: 0 P: 0	Credits:

After the completion of this course, the students should be able to

1	Discuss the various synchronization, scheduling and memory management issues demonstrate the Mutual exclusion.
2	Deadlock detection and agreement protocols of Distributed operating system
3	Discuss the various resource management techniques for distributed systems
4	Identify the different features of real time and mobile operating systems
5	Install and use available open source kernel. Modify existing open source kernels in terms of functionality or features used

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) PYTHONPROGRAMMING (B18CS42)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Read, write, execute by hand simple Python programs.			
2	Structure simple Python programs and decomposing program into functions.			
3	Represent compound data using Python lists, tuples, dictionaries,			
4	Read and write data from/to files in Python Programs.			
5	To build software for real needs.			

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) CYBER SECURITY& HACKING (B18CS43)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Outline key terms and concepts in cyber law, intellectual property and cybercrimes.			
2	Explore the vulnerabilities, threats and cybercrimes posed by criminals.			
3	Identify various security challenges phased by mobile devices.			
4	Identify various types of tools and methods used in cybercrime, develops the secure counter methods to maintain security protection.			
5	Analyze the cyber security risk management policies in order to adequately protect an organization's critical information and assets.			

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) SERVICE ORIENTED ARCHITECTURE (B18CS44)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Design various service layers			
2	Model service candidate derived from existing business documentation.			
3	Design the composition of SOA.			
4	Design application services for technology abstraction.			
5	Principles of Service-Orientation.			

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) INFORMATION RETRIEVAL SYSTEMS (B18CS45)	No. of Hours L: 3 T: 0 P: 0	Credits: 3
After the completion of this course, the students should be able to				
1	Define Vector space model, understand various similarity coefficient and measures.			
2	Develop an Understanding on Relevance feedback, Clustering, Regression Analysis, Thesauri.			
3	Apply various Retrieval Utilities for Information Retrieval.			
4	Develop an Understanding about Signature files, Duplicate document detection.			
5	Apply IR principles to locate relevant information large collection of data.			

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) TECHNICAL SEMINAR(B18CS48)	No. of Hours L: 1 T: 0 P: 0	Credits: 2
After the completion of this course, the students should be able to				
1	Identifies, understand and discuss current, real -world issues.			
2	Explain the role of self-efficacy, personal goals, and motivation in improving academic life			
3	Describe the behaviors and characteristics of an effective learner. Gain knowledge of fast and rapidly changing by self learning			
4	Practice finding relevant course material on the Internet and incorporate them in their courses. Develop articles and presentation skills			
5	Develop the interpersonal skills, soft skills and creativity. Present features of the developed project to the targeted group through written and oral communication.			

Course Outcome	Year / semester VIII Sem	Subject Name (Subject Code) MAJOR PROJECT PHASE – II (B18CS49)	No. of Hours L: 0 T: 0 P: 16	Credits: 8
After the completion of this course, the students should be able to				
1	Uses fundamental knowledge and skills in engineering and apply it effectively on a project.			
2	Apply knowledge of the 'real world' situations that a professional engineer can encounter.			
3	Apply critical and creative thinking in the design of software, Hardware and Networking projects.			
4	As a team student can organize, record and compile their work done throughout the project in an efficient manner.			
5	Manage any disputes and conflicts within and outside their team.			
6	Demonstrate a sound technical knowledge of their selected project topic.			
7	Demonstrate the knowledge, skills and attitudes of a professional engineer.			
8	Summarize an appropriate list of literature review, analyze previous work and relate them to current project.			