VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

Department of Computer Science & Engineering
Course outcomes

B.TECH (CSE) I YEAR I SEMESTER: ENGLISH-I

After completing this course the student must demonstrate the knowledge and ability to	
C101.1	Students will develop effective writing process to apply various modes of writing & to attain confidence in proficiency of penmanship required for professionals.
C101.2	Students will be able to assimilate influential personalities & gain understanding of human & professional values, & social etiquette.
C101.3	To understand new versions of technology for effective usage of human resources towards development and to avoid risks.
C101.4	Students will be able to identify principles and values that build collaborative knowledge & allow them to cultivate social responsibility.
C101.5	Students will develop effective writing process to apply various modes of writing & to attain confidence in proficiency of penmanship required for professionals.

B.TECH (CSE) I YEAR I SEMESTER: MATHEMATICS -I

After completing this course the student must demonstrate the knowledge and ability to	
C102.1	Understand the term rank and Elementary Transformations of a Matrix, System of Equations.
C102.2	Compute Eigen values and corresponding Eigen vectors of a square matrix, finding Inverse and method of Diagonalization.
C102.3	Verification of the Mean value theorems and to study maxima and minima of functions of two variables.
C102.4	Evaluation of improper integrals by using beta gamma functions and evaluation of double and triple integrals by tracing the region of integration.
C102.5	Finding Laplace transform of various functions and solving the initial value problems by using Laplace transforms.

B.TECH (CSE) I YEAR I SEMESTER: ENGINEERING PHYSICS-I

After completing this course the student must demonstrate the knowledge and ability to	
C103.1	To analyze the crystal structures, properties and to identify defects in crystals.
C103.2	To understand the diffraction, interference and polarization phenomenon of light rays.
C103.3	To know the basics of statistical mechanics and to understand the applications of LASERs in various fields.
C103.4	To interpret the significance of Magnetic materials.

C103.5	To know the fundamentals of Dielectrics and their applications.

B.TECH (CSE) I YEAR I SEMESTER: COMPUTER PROGRAMMING-I

After completing this course the student must demonstrate the knowledge and ability to	
C104.1	Know the basics of computers and its Generation.
C104.2	Able to write Algorithms, draw flowcharts and write basic programs.
C104.3	Able to implement programs using control structures.
C104.4	To understand derived data types and develop programs using Arrays and Strings.
C104.5	To understand functions and implement Arrays, Strings using functions.

B.TECH (CSE) I YEAR I SEMESTER: ENGINEERING GRAPHICS

After completing this course the student must demonstrate the knowledge and ability to	
C105.1	Understand the usage of different drawing instruments and know the application of different curves used in engineering practice. Appreciate the concept of projections in first angle.
C105.2	Generate various scales used in engineering practice.
C105.3	Conceptualize and draw the projections of points and straight lines.
C105.4	Visualize and project different views of a planes.
C105.5	Visualize and draw the views of a given solid.

B.TECH (CSE) I YEAR I SEMESTER: ENGINEERING CHEMISTRY

After completing this course the student must demonstrate the knowledge and ability to	
C106.1	Ability to understand the various processes of treatment of water for both industrial and domestic purpose.
C106.2	Understand the operating principles and the reaction mechanisms of batteries and fuel cells.
C106.3	Apply the knowledge for protection of different metals from corrosion.
C106.4	An ability to identify and formulate polymers and have knowledge of their engineering applications.
C106.5	Have knowledge of various advanced engineering materials like Nanomaterials, Biodegradable polymers, Biofuels and composites.

B.TECH (CSE) I YEAR I SEMESTER: COMPUTER PROGRAMMING LAB-I

After completing this course the student must demonstrate the knowledge and ability to	
C107.1	Explain basic commands in Linux.
C107.2	Read, understand and trace the execution of programs written in C language.
C107.3	Develop programs in C language.

C107.4	Design programs for various problems in C language.
C107.5	Solve computing problems using control structures and arrays.

B.TECH (CSE) I YEAR I SEMESTER: ENLISH LANGUAGE COMMUNICATION SKILLS LAB-I

After completing this course the student must demonstrate the knowledge and ability to	
C108.1	Enables students to master individual sounds of English and the manner of articulation in producing speech sounds.
C108.2	Enables even shy learners to be actively involved in communication through ice breaking and JAM sessions.
C108.3	Enables learners to access a variety of information like vocabulary, glosses, pronunciation, grammatical explanations for appropriately use the target language.
C108.4	Enables to achieve swift development among the learners communicative ability through frequent exchange of ideas and discussions.
C108.5	Facilitates continuous evaluation enabling the learners to understand the concepts &skills of communication that are useful in day-to- day life.

B.TECH (CSE) I YEAR I SEMESTER: EP/EC LAB-I

After completing this course the student must demonstrate the knowledge and ability to	
C109.1	To experiment on Melde's and Torsional pendulum with knowledge in waves and mechanics.
C109.2	Visualize the fundamental optical phenomenon like Interference, diffraction and Dispersion.
C109.3	To Study the basic Electrical characteristics of LED, RC circuits.
C109.4	Can use the knowledge of Titrimetric analysis is applied for estimating the quantity of the compound accurately.
C109.5	Can handle instruments like conductometer and potentiometer for quantitative analysis.
C109.6	Able to calculate and record the physical properties like Viscosity and Surface tension

B.TECH (CSE) I YEAR I SEMESTER: ITWS

After completing this course the student must demonstrate the knowledge and ability to	
C110.1	Getting enough knowledge to assemble a computer and identifying various components.
C110.2	To get hands on experience in software Installation.
C110.3	Ability to Understand the trouble shooting problems.
C110.4	To learn the tools Power Point, Documentation, Tabulation and Calculations.
C110.5	To get Exposure how to use Internet and World Wide Web.

B.TECH (CSE) I YEAR II SEMESTER: ENGLISH-II

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

Department of Computer Science & Engineering
Course outcomes

After completing this course the student must demonstrate the knowledge and ability to	
C201.1	Students through appreciation of literature will be able to elicit feelings & use language appropriately as a fundamental of human activity.
C201.2	Students will be able to make critical decisions & manage risks enabling them to bridge the divide between Risk and its Management for successful careers.
C201.3	Students will be able to identify principles and values that build collaborative knowledge & allow them to cultivate social responsibility.
C201.4	Students will be able to read & listen, to comprehend & interpret with analytical proficiency needed for professional endeavors.
C201.5	Students will be able to synthesize information for communication strategies to write, discuss or/and respond in English appropriately and show a nuanced use of the language.

B.TECH (CSE) I YEAR II SEMESTER: MATHEMATICS -II

After completing this course the student must demonstrate the knowledge and ability to	
C202.1	Specify standard methods for solving first order differential equations and their applications.
C202.2	Identify different types of higher order differential equations and their applications in engineering problems.
C202.3	Studying of Fourier series and defining it for various types of functions.
C202.4	Evaluating the Fourier transforms of functions of single variable.
C202.5	Evaluate integrals of functions or vector-related quantities over curves, surfaces, and domains in two- and three-dimensional space.

B.TECH (CSE) I YEAR II SEMESTER: ENGINEERING PHYSICS-II

After completing this course the student must demonstrate the knowledge and ability to	
C203.1	To hypothesis the principles of Quantum mechanics & free electron theory.
C203.2	To differentiate the types of solids based on band theory of solids and to understand the applications of optical fibers in various fields.
C203.3	To know the basics of semiconductors and semiconductor devices.
C203.4	To understand superconductivity and their applications in modern technology.
C203.5	To characterize the Nanomaterials and to know the importance of nanomaterials in various fields.

B.TECH (CSE) I YEAR II SEMESTER: COMPUTER PROGRAMMING-II

After completing this course the student must demonstrate the knowledge and ability to

C204.1	Implement various sorting and searching algorithms
C204.2	Design solutions using derived data types and user defined data types- structures, arrays, pointers.
C204.3	Implement dynamic memory allocation for effective memory utilization.
C204.4	Implement linear data structures-list, stack and queue.
C204.5	Apply various file handling techniques for better data management.

B.TECH (CSE) I YEAR II SEMESTER: MATHEMATICS -III

After completing this course the student must demonstrate the knowledge and ability to	
C205.1	Develop skills in solving engineering problems involving Algebraic and transcendental equations
C205.2	Acquires the knowledge of interpolation in predicting future out comes based on the present knowledge
C205.3	Evaluating the Numerical Solutions for Integrals and Fitting of different types of curves to the given data
C205.4	Understand the various Numerical Methods to solve Initial Value Problems
C205.5	Study the Applications of Partial Differential Equations

B.TECH (CSE) I YEAR II SEMESTER: BASIC ELECTRICAL ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C206.1	To understand the basic electrical circuit parameters and the concepts of AC/DC circuits. Apply theorems to solve both AC and DC circuits.
C206.2	To Understand RMS and Average value calculations for different alternating quantities and the representation of alternating quantities in Phasor form.
C206.3	To understand the construction and operation of the transformer, calculation of efficiency and regulation at different operating power factors.
C206.4	To understand the construction and operation of DC/AC machines and their applications
C206.5	To get the knowledge of the measuring instruments and their operational aspects in detail.

B.TECH (CSE) I YEAR II SEMESTER: COMPUTER PROGRAMMING LAB-II

After completing this course the student must demonstrate the knowledge and ability to	
C207.1	Implement various sorting and searching algorithms
C207.2	Design solutions using derived data types and user defined data types- structures, arrays, pointers
C207.3	Implement dynamic memory allocation for effective memory utilization
C207.4	Implement linear data structures-list,stack and queue
C207.5	Apply various file handling techniques for better data management

B.TECH (CSE) I YEAR II SEMESTER: ENLISH LANGUAGE COMMUNICATION SKILLS LAB-II

After completing this course the student must demonstrate the knowledge and ability to	
C208.1	Enables the students to develop effective communication with the exposure to speaking and listening practices & short talks to develop speaking and listening skills. Skimming, scanning, summarizing to develop reading skills & provide different sentence structures & exercises in linking sentences for developing writing skills.
C208.2	Enables the students to develop effective communication through various language learning strategies.
C208.3	Enables the students to learn stress, rhythm, intonation, syllable division & minimal pairs to improve the learner's ability to differentiate between similar sounding sets of words in isolation & in sentences.
C208.4	Enables students to know & exhibit proper etiquette is essential in social & professional situations which can mean the difference between success and failure in many aspects of life.
C208.5	Enables the students to develop effective communication with the exposure to natural communication.

B.TECH (CSE) I YEAR II SEMESTER: EWS

After completing this course the student must demonstrate the knowledge and ability to	
C209.1	Study and practice on workshop tools and their operations.
C209.2	Manufacture wooden and metallic components using carpentry and foundry respectively.
C209.3	Join two or materials using welding equipment.
C209.4	Fabricate ferrous components using blacksmithy technique
C209.5	Demonstrate skills on plumbing and machine shops trades.

B.TECH (CSE) II YEAR I SEMESTER: PROBABILITY &STATISTICS

After completing this course the student must demonstrate the knowledge and ability to	
C301.1	Understanding of the basics concepts of probability, random variables, binomial and normal distributions.
C301.2	Understand the concept of the sampling distribution of a statistics, and in particular describe the behavior of the sample mean.
C301.3	Use the normal distributions to test statistical hypotheses and to Compute confidence intervals.
C301.4	Application of regression analysis to analyze a problem.
C301.5	Application of control charts for quality control and measurement of trends.

B.TECH (CSE) II YEAR I SEMESTER: MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

After completing this course the student must demonstrate the knowledge and ability to	
C302.1	To evaluate elementary mathematical arguments and identify fallacious reasoning (not just fallacious conclusions).
C302.2	Solve discrete mathematics problems that involve: computing permutations and combinations of a set.

C302.3	Analyze and deduce problems involving recurrence relations and generating functions.
C302.4	Perform operations on discrete structures such as sets, functions, relations and sequences.
C302.5	Apply Graph theory models to solve problems of Computer Science & Engineering.

B.TECH (CSE) II YEAR I SEMESTER: DATA STRUCTURES

After completing this course the student must demonstrate the knowledge and ability to	
C303.1	Analyze the representation of various data structures and implement the mechanisms of Stacks and Queues with their applications.
C303.2	Implement the operations like searching, insertion, deletions and traversing mechanisms on Binary Trees.
C303.3	Implement various advance concepts of trees with real time applications.
C303.4	Implement various algorithms on graph data structures, including finding the minimum spanning tree, shortest path with real time applications, etc.
C303.5	Outline the concepts of hashing, collision and its resolution methods using hash function.

B.TECH (CSE) II YEAR I SEMESTER: DIGITAL LOGIC DESIGN

After completing this course the student must demonstrate the knowledge and ability to	
C304.1	Understand various number systems, conversions, range and error detecting and correcting codes and their significance.
C304.2	Evaluate the minimization of logic gates using Boolean algebraic principles and k-maps.
C304.3	Design various simple and complex combinational circuits with real time applications.
C304.4	Analyze the basic principles behind Flip flops & the design of sequential circuits with real time applications.
C304.5	Illustrate various types of memory devices and their design.

B.TECH (CSE) II YEAR I SEMESTER: OBJECT ORIENTED PROGRAMMING

After completing this course the student must demonstrate the knowledge and ability to	
C305.1	Describe importance concepts of Object Oriented Programming.
C305.2	Develop the applications using Object Oriented Programming through C++.
C305.3	Implements the concepts of inheritance and polymorphism.
C305.4	Apply the IO Streams and files to develop a program for real time problems.
C305.5	Apply advanced features like templates and exception handling to make programs supporting reusability and sophistication.

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

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B.TECH (CSE) II YEAR I SEMESTER: ELECTRONIC DEVICES & CIRCUITS

After completing this course the student must demonstrate the knowledge and ability to	
C306.1	Apply basics of electronics to design of various complex electronics circuit.
C306.2	Understand and Analyze the different types of diodes, operation and its characteristics.
C306.3	Design and analyze the DC bias circuitry of BJT and FET Design biasing circuits using diodes and transistors.
C306.4	To analyze and design diode application circuits, amplifier circuits and oscillators employing BJT, FET devices.

B.TECH (CSE) II YEAR I SEMESTER: ED&CIRCUITS &DLD LAB

After completing this course the student must demonstrate the knowledge and ability to	
C307.1	Verify Super position, Maximum power transfer, Reciprocity, Thevenin's and Norton's theorems.
C307.2	Conduct OC and SC test on single–phase Transformer and calculating efficiency.
C307.3	Understand the characteristics of DC shunt generator and to conduct brake test on DC shunt motor and determination of performance characteristics.
C307.4	Identify the specifications and testing of R, L, C and Bread boards and to find the characteristics of PN junction diode, Zener diode and Transistor CE.

B.TECH (CSE) II YEAR I SEMESTER: DATA STRUCTURES LAB

After completing this course the student must demonstrate the knowledge and ability to	
C308.1	Develop the programs on stack and its applications
C308.2	Demonstrate the operations on trees
C308.3	Demonstrate the implementations of various advanced trees
C308.4	Design and implementation of programs on BST and graph traversals
C308.5	Understand the C++ program structure and also basics of C++ programming.

B.TECH (CSE) II YEAR II SEMESTER: DESIGN & ANALYSIS OF ALGORITHMS

After completing this course the student must demonstrate the knowledge and ability to	
C401.1	Analyze the efficiency of algorithms.
C401.2	Develop algorithms divide & conquer, greedy and related problems.
C401.3	Examine the performance of Dynamic programming.
C401.4	Explain performance of algorithm using Backtracking.

C401.5	Analyze NP-Hard and NP-Complete problems.

B.TECH (CSE) II YEAR II SEMESTER: COMPUTER ORGANIZATION

After completing this course the student must demonstrate the knowledge and ability to	
C402.1	Understanding the basic organization of computer and different instruction formats and addressing modes.
C402.2	Analyze the concept of pipelining, segment registers and pin diagram of CPU.
C402.3	Write simple programs on assembly language.
C402.4	Evaluate various modes of data transfer between CPU and I/O devices.
C402.5	Examine various inter connection structures of multi processors.

B.TECH (CSE) II YEAR II SEMESTER: DATABASE MANAGEMENT SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C403.1	Design Entity-Relationship Model for enterprise level databases.
C403.2	Develop the database and provide restricted access to different users of database and formulate the Complex SQL queries.
C403.3	Analyze various Relational Formal Query Languages and various Normal forms to carry out Schema refinement.
C403.4	Use of suitable Indices and Hashing mechanisms for real time implementation.
C403.5	Ability to analyze various concurrency control protocols and working principles of recovery algorithms

B.TECH (CSE) II YEAR II SEMESTER: SOFTWARE ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C404.1	Choose a process model to apply for given project requirements
C404.2	Analyze and apply the framework activities for a given project
C404.3	Design various system models for a given scenario
C404.4	Design and apply various testing techniques
C404.5	Understand metrics for Process and Products

B.TECH (CSE) II YEAR II SEMESTER: JAVA PROGRAMMING

After completing this course the student must demonstrate the knowledge and ability to	
C405.1	Understand OOP concepts to apply basic Java constructs.
C405.2	Analyze different forms of inheritance and handle different kinds of file I/O.
C405.3	Evaluate the usage of Exception Handling and Multithreading in complex Java programs.
C405.4	Construct different GUI layouts and design GUI applications.

C405.5	Construct a full-fledged Java GUI application and Applet with database connectivity.

B.TECH (CSE) II YEAR II SEMESTER: ENVIRONMENTAL STUDIES

After completing this course the student must demonstrate the knowledge and ability to	
C406.1	Explain the importance of Ecosystem.
C406.2	Identify the importance of Renewable and Non-Renewable Resources.
C406.3	Awareness on the Variety of Living organism and the need to conserve them.
C406.4	Evaluate the sustainable developments towards Pollution free environment
C406.5	Understand the Environmental Policies Management Plan and Regulations.

B.TECH (CSE) II YEAR II SEMESTER: JAVA PROGRAMMING LAB

After completing this course the student must demonstrate the knowledge and ability to	
C407.1	Apply basic Java constructs and OOP to solve mathematical problems.
C407.2	Apply Inheritance in Java programs to implement File input/output.
C407.3	Analyze Exception Handling code and Multithreading concepts in advanced Java programs.
C407.4	Design different GUI applications using GUI layouts.
C407.5	Apply Applet development and Database connectivity to build GUI applications.

B.TECH (CSE) II YEAR II SEMESTER: DATABASE MANAGEMENT SYSTEMS LAB

After completing this course the student must demonstrate the knowledge and ability to	
C408.1	Apply SQL statements including DDL, DML and DCL statements to perform different operations.
C408.2	Design different views of tables for different users.
C408.3	Apply various integrity Constraints on the database tables.
C408.4	Apply the Normalization techniques to the data base for consistency.
C408.5	Implement PLSQL concepts like cursors, procedures and triggers.

B.TECH (CSE) III YEAR I SEMESTER: LINUX PROGRAMMING

After completing this course the student must demonstrate the knowledge and ability to	
C501.1	Understand and make effective use of Linux utilities.
C501.2	Able to write shell scripts to solve the problems.
C501.3	Develop the skills necessary for file system and directory handling.
C501.4	Learn the concepts of process and signal system calls.
C501.5	Implement inter process communication mechanisms.

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B.TECH (CSE) III YEAR I SEMESTER: COMPUTER NETWORKS

After completing this course the student must demonstrate the knowledge and ability to	
C502.1	Understand the concept of network reference models
C502.2	Analyze various connecting devices of a network and describe multichannel access protocols
C502.3	Analysis of routing algorithm and congestion algorithms and classify IPV4 addressing scheme
C502.4	Understand Transport layer protocols
C502.5	Discuss Application layer protocols

B.TECH (CSE) III YEAR I SEMESTER: OPERATING SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C503.1	Understanding the operating system concepts and process management
C503.2	Analyze process scheduling and synchronization
C503.3	Understand memory management concepts
C503.4	Illustrate File system implementation and mass storage structure
C503.5	Analyze deadlock mechanisms

B.TECH (CSE) III YEAR I SEMESTER: FORMAL LANGUAGES & AUTOMATA THEORY

After completing this course the student must demonstrate the knowledge and ability to	
C504.1	Analyze and design Finite state machine for solving problems of computer science.
C504.2	Design regular grammars for Finite Automata.
C504.3	Analyze context free grammars and push down automata.
C504.4	Find the solutions for the problems of computer science using Turing Machines.
C504.5	Analyze Chomsky Hierarchy and computability theory.

B.TECH (CSE) III YEAR I SEMESTER: PRINCIPLES OF PROGRAMMING LANGUAGES

After completing this course the student must demonstrate the knowledge and ability to	
C505.1	Ability to apply suitable programming paradigm for the application.
C505.2	Ability to express syntax and semantics in formal notation.
C505.3	Apply Object Oriented, Concurrency programming constructs
C505.4	Comparing features of different programming languages.

B.TECH (CSE) III YEAR I SEMESTER: HUMAN COMPUTER INTERACTION

After completing this course the student must demonstrate the knowledge and ability to

C505.1	Understand the capabilities of both humans and computers from the viewpoint of human information processing.
C505.2	Analyze the design process and use the design rules.
C505.3	Identify and analyze the user models and theories.
C505.4	Compare different mobile applications and analyze mobile design.
C505.5	Design the web interface using drag and drop, overlays etc.

B.TECH (CSE) III YEAR I SEMESTER: SOFTWARE PROJECT MANAGEMENT

After completing this course the student must demonstrate the knowledge and ability to	
C505.1	Describe and determine the purpose and importance of project management from the perspectives of planning, tracking and completion of project.
C505.2	Describe Artifacts of the process and process automation.
C505.3	Compare and differentiate organization structures and project structures.
C505.4	Design the web interface using drag and drop, overlays etc.

B.TECH (CSE) III YEAR I SEMESTER: INTRODUCTION TO MICROCONTROLLER & APPLICATIONS

After completing this course the student must demonstrate the knowledge and ability to	
C506.1	Describe the architecture of 8051 with its special function registers
C506.2	Interpret the internal organization of 8051 with its unique features.
C506.3	Infer and give examples about the various addressing modes, instruction formats and instructions of 8051.
C506.4	Construct the hardware and software interaction with each other using programming.
C506.5	Summarize the features of the advanced architecture using ARM controller.

B.TECH (CSE) III YEAR I SEMESTER: BASIC ELECTRONICS & INSTRUMENTATION

After completing this course the student must demonstrate the knowledge and ability to	
C507.1	Summarize the concepts of different Diode devices with its characteristics.
C507.2	Summarize the concepts of different Transistor devices with its characteristics.
C507.3	Describe the fundamental concepts and basic principle of meters.
C507.4	Categorize different transducers and their working principles
C507.5	Explain different bridges and understand how different physical parameters can be acquired.

B.TECH (CSE) III YEAR I SEMESTER: NON-CONVENTIONAL ENERGY SOURCES

After completing this course the student must demonstrate the knowledge and ability to	
C508.1	Realize the importance of renewable energy sources for energy planning.

C508.2	Understand the value of solar energy potential and exploit the solar energy for real world applications.
C508.3	Understand the potential of wind energy, types of wind mills, performance characteristics and Betz criteria.
C508.4	Analyze the potential of both tidal and ocean thermal energies and learn the extraction methods.
C508.5	Know the potential of Geothermal, Bio-mass energies and learn relevant extraction methods.

B.TECH (CSE) III YEAR I SEMESTER: ELEMENTS OF MECHANICAL ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C509.1	Understand the basic concepts of mechanical engineering.
C509.2	Applying principles of engineering mechanics in mechanism and machines
C509.3	Develop manufacturing methods to produce engineering components.
C509.4	Evaluating alternative designs for the engineering components
C509.5	Comparing various standards relevant to automobiles.

B.TECH (CSE) III YEAR I SEMESTER: PRODUCT ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C510.1	Identifying scheduling techniques for project management.
C510.2	Designing the products and their life cycles.
C510.3	Generating the products with different material requirements.
C510.4	Conceptualization the products with their drawings for standardization.
C510.5	Evaluating the life of the products by conducting various tests.

B.TECH (CSE) III YEAR I SEMESTER: SMART CITY

After completing this course the student must demonstrate the knowledge and ability to	
C511.1	Understand the necessity of smart infrastructure and to promote cities that provide quality of life to citizens.
C511.2	Explain technology-based solution on smart mobility.
C511.3	Illustrate & introduce the smart and sustainable waste and water management for smart cities.
C511.4	Evaluate economical models for smart infrastructure solution.
C511.5	Create healthy and waste ridden environment.

B.TECH (CSE) III YEAR I SEMESTER: REMOTE SENSING & GIS

After completing this course the student must demonstrate the knowledge and ability to

C512.1	Select the type of remote sensing technique / data for required purpose.
C512.2	Identify the earth surface features from satellite images.
C512.3	Analyze the energy interactions in the atmosphere and earth surface features.
C512.4	Prepare thematic maps.
C512.5	Interpretations of satellite data for various applications.

B.TECH (CSE) III YEAR I SEMESTER: TOTAL QUALITY MANAGEMENT

After completing this course the student must demonstrate the knowledge and ability to	
C513.1	To explore the quality framework in production and operational aspects.
C513.2	To evaluate the role of quality in product design and analysis.
C513.3	To analyze quality in process improvement and modern production management tools.
C513.4	To understand the role of TQM tools and techniques in elimination of wastages and reduction of defects.
C513.5	To analyze the requirements of quality management system.

B.TECH (CSE) III YEAR I SEMESTER: OPERATING SYSTEMS & COMPUTER NETWORKS THROUGH LINUX LAB

After completing this course the student must demonstrate the knowledge and ability to	
C514.1	Implement Data link layer framing methods.
C514.2	Implement various algorithms for error detection and correction.
C514.3	Simulate various routing algorithms.
C514.4	Implement CPU scheduling algorithms.
C514.5	Simulate various page replacement techniques and file allocation methods.
C514.6	Implement deadlock avoidance and prevention algorithms.

B.TECH (CSE) III YEAR I SEMESTER: ADVANCED COMMUNICATION SKILLS LAB

After completing this course the student must demonstrate the knowledge and ability to	
C515.1	Develop sound communication skills in various situations with the help of (enriched) vocabulary.
C515.2	Practice reading techniques for a faster and better comprehension.
C515.3	Exhibit strong writing skills to express ideas effectively.
C515.4	Demonstrate effective presentation skills.

C515.5	Use appropriate verbal and non-verbal skills for a successful career.

B.TECH (CSE) III YEAR II SEMESTER: WEB TECHNOLOGIES

After completing this course the student must demonstrate the knowledge and ability to	
C601.1	Create static and dynamic web pages using HTML and java script.
C601.2	Analyze the XML and how to parse XML data with java.
C601.3	Develop web applications using server side scripting language-PHP.
C601.4	Implement the web applications using JDBC and java servlets.
C601.5	Apply web applications with Java Server Pages.

B.TECH (CSE) III YEAR II SEMESTER: COMPILER DESIGN

After completing this course the student must demonstrate the knowledge and ability to	
C602.1	Differentiate the phases in compilation & parsing.
C602.2	Identify the process in parsing and semantic analysis.
C602.3	Explain about symbol tables and code optimization methods.
C602.4	Explain about code optimization methods.
C602.5	Analyze data flow and generate object code.

B.TECH (CSE) III YEAR II SEMESTER: DATA WAREHOUSING AND DATAMINING

After completing this course the student must demonstrate the knowledge and ability to	
C603.1	Understand the fundamentals of Data warehousing and OLAP technology.
C603.2	Understand Data Mining and Data Pre-processing.
C603.3	Analyze and apply association algorithms on large data sets.
C603.4	Analyze and apply classification algorithms on large data sets.
C603.5	Analyze and apply clustering techniques on large data.

B.TECH (CSE) III YEAR II SEMESTER: MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

After completing this course the student must demonstrate the knowledge and ability to	
C604.1	Understand the nature and scope of business economics.
C604.2	Differentiate the various forms of Business organizations.
C604.3	Identify the impact of economic variables on the Business firms.
C604.4	Analyze the Demand, Supply, Production, Cost, Market Structure, Pricing aspects.

C604.5	Analyze, compare and interpret the Financial Statements of a Company using ratios.

B.TECH (CSE) III YEAR II SEMESTER: OBJECT ORIENTED ANALYSIS & DESIGN

After completing this course the student must demonstrate the knowledge and ability to	
C605.1	Understand object oriented software development process.
C605.2	Gain exposure to object oriented methodologies & UML diagrams.
C605.3	Use object oriented behavioral modeling analysis for project.
C605.4	Apply object oriented Architectural modeling analysis for project.
C605.5	Construct for developing structural design of a given project by using.

B.TECH (CSE) III YEAR II SEMESTER: DISTRIBUTED SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C605.1	Able to understand the characteristics of Distributed Systems and Global States.
C605.2	Able to differentiate the types of Interprocess communication.
C605.3	Able to Understand DNS and Able to implement file service Architecture.
C605.4	Able to Analyze the Distributed Transaction Management

B.TECH (CSE) III YEAR II SEMESTER: INFORMATION RETRIEVAL SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C605.1	Recognize the Boolean Model, Vector Space Model, and Probabilistic Model.
C605.2	Understand retrieval utilities and different formatting tags.
C605.3	Understand cross-language information retrieval.
C605.4	Understand the clustering techniques and determine the efficiency.

B.TECH (CSE) III YEAR II SEMESTER: FUNDAMENTALS OF EMBEDDED SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C606.1	Contrast the basics of embedded system with its application.
C606.2	Illustrate the components required for embedded system design.
C606.3	Summarize the different development tool for embedded system.
C606.4	Relate the concepts of RTOS in real time programming.
C606.5	Outline the features of advanced buses for distributed data transfer in system design.

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

Department of Computer Science & Engineering
Course outcomes

B.TECH (CSE) III YEAR II SEMESTER: PRINCIPLES OF COMMUNICATION

After completing this course the student must demonstrate the knowledge and ability to	
C607.1	Understanding the fundamentals of communications.
C607.2	Summarize the different modulation techniques involved in analog Communication.
C607.3	Summarize the different modulation techniques involved in digital Communication.
C607.4	Identify the applications of various wired and wireless communications in real time.
C607.5	Elaborate the fundamentals of satellite and optical communications.

B.TECH (CSE) III YEAR II SEMESTER: PRINCIPLES OF ELECTRICAL POWER UTILIZATION

After completing this course the student must demonstrate the knowledge and ability to	
C608.1	Understand terms and concepts of illumination.
C608.2	Apply the concepts of different electric lamps and good lighting Practices for artificial lighting systems.
C608.3	Understands the methods of electric heating and welding.
C608.4	Understands the concepts of different electric traction systems and existing traction system in India.
C608.5	Analyze the mechanics of train movement.

B.TECH (CSE) IIIYEAR II SEMESTER: ENERGY AUDITING AND CONSERVATION

After completing this course the student must demonstrate the knowledge and ability to	
C609.1	Realize the need for energy auditing and conservation. Get awareness on types of energy audit; represent energy flows and energy consumption in tabular and graphical methods.
C609.2	Understand and exploit energy saving opportunities in energy efficient motors and power factor improvement methods.
C609.3	Learn energy auditing and conservation opportunities in HVAC systems with respect to energy efficient buildings.
C609.4	Analyze economic viability with respect to real world problems using depreciation methods.
C609.5	Know the check lists for energy conservation in boilers, heat pumps, cooling systems, compressors and fans.

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

Department of Computer Science & Engineering
Course outcomes

B.TECH (CSE) I11 YEARI I SEMESTER: BASIC AUTOMOBILE ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C610.1	Understanding the basic structure of an automobile.
C610.2	Evaluating different cooling and lubrication systems of an automobile.
C610.3	Analyzing the electrical systems in tandem with ignition systems.
C610.4	Comparing the various transmission systems for their effectiveness.
C610.5	Understanding and there by implement the subsystems in the automobile for its low emission.

B.TECH (CSE) III YEAR II SEMESTER: MATERIAL SCIENCE ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C611.1	Understanding the crystal structures and necessity of alloys.
C611.2	Classifying the ferrous materials and their heat treatment process.
C611.3	Evaluating the non-ferrous materials and their applications in Engineering usage.
C611.4	Applying the composite materials as an efficient substitute.
C611.5	Implementing the principles of nano science and their by producing materials.

B.TECH (CSE) III YEAR II SEMESTER: GREEN BUILDING TECHNOLOGIES

After completing this course the student must demonstrate the knowledge and ability to	
C612.1	Understand the Green building concept and focus on approaches that make building sustainable.
C612.2	Illustrate Green building assessment and accreditation system.
C612.3	Able to apply low energy building strategies.
C612.4	Designing green building and improve sustainability of infrastructure.
C612.5	Classify the economic benefits of green buildings.

B.TECH (CSE) III YEAR II SEMESTER: ENVIRONMENT POLLUTION & CONTROL METHODS

After completing this course the student must demonstrate the knowledge and ability to	
C613.1	Understanding about the various air pollutants and effect on environment.
C613.2	Analyze quality of air in the form of air quality index and dispersion modeling.
C613.3	Determine sampling and measurements of air Pollutants.
C613.4	Analysis and measurement of soil contamination.
C613.5	Predict types of noise and problems arise due to noise pollution.

B.TECH (CSE) III YEAR II SEMESTER: FINANCIAL INSTITUTIONS AND MARKETS

After completing this course the student must demonstrate the knowledge and ability	
C614.1	To explore Indian investment environment.
C614.2	To evaluate available investment avenues.
C614.3	To study the operational framework of financial markets
C614.4	To analyze the role of regulatory bodies in Indian Financial system.
C614.5	To identify recent trends and challenges in Indian banking sector

B.TECH (CSE) III YEAR II SEMESTER: WEB TECHNOLOGIES & CASE TOOLS LAB

After completing this course the student must demonstrate the knowledge and ability	
C615.1	Create static web application using HTML.
C615.2	Create dynamic web applications XML, Java script and validation of forms.
C615.3	Develop web applications with servlets Java server pages, PHP, MYSQL.
C615.4	Understand how UML supports the entire OOAD process.
C615.5	Apply the phases of OOAD to real time applications.
C615.6	Understand the essential characteristics of tools used for designing a model.

B.TECH (CSE) IV YEAR I SEMESTER: COMPILER DESIGN & DATA MINING LAB

After completing this course the student must demonstrate the knowledge and ability to	
C616.1	Understand the role of Lexical analyzer.
C616.2	Identify the working of compiler construction tools-LEX, YACC and Parser.
C616.3	Derive Machine code from intermediate code.
C616.4	Able to understand WEKA tool.
C616.5	Ability to add mining algorithms as a component to the existing tools.
C616.6	Able to apply mining techniques for realistic data.

B.TECH (CSE) IV YEAR I SEMESTER: MOBILE APPLICATION DEVELOPMENT

After completing this course the student must demonstrate the knowledge and ability to	
C701.1	Understand the concept of J2ME.
C701.2	Design a User interface for a mobile application using J2ME.

C701.3	Create a mobile application for small computing devices.
C701.4	Apply the concepts of JDBC & Embedded SQL for Database Connection.
C701.5	Understand the generic connection framework.

B.TECH (CSE) IV YEAR I SEMESTER: INFORMATION SECURITY

After completing this course the student must demonstrate the knowledge and ability to	
C702.1	Identify various security attacks.
C702.2	Understand various encryption principles and algorithms.
C702.3	Analyze different cryptography algorithms.
C702.4	Understand various security association and key management.
C702.5	Design a firewall for security.

B.TECH (CSE) IV YEAR I SEMESTER: CLOUD COMPUTING

After completing this course the student must demonstrate the knowledge and ability to	
C703.1	Understand different Cloud Services.
C703.2	Analyze different Approaches for migration into cloud.
C703.3	Prioritize the challenges in cloud Technology.
C703.4	Understand the Virtualization Concepts.
C703.5	Assess future Research directions in cloud computing.

B.TECH (CSE) IV YEAR I SEMESTER: BIG DATA ANALYTICS

After completing this course the student must demonstrate the knowledge and ability to	
C704.1	Explain the foundations, definitions, and challenges of Big Data.
C704.2	Use Hadoop file system interfaces.
C704.3	Program using HADOOP and Map Reduce, NOSQL.
C704.4	Understand various Hadoop Eco Systems like Pig, Hive.
C704.5	Outline Hadoop Eco System using Hbase, Zookeper.

B.TECH (CSE) IV YEAR I SEMESTER: INTERNET OF THINGS

After completing this course the student must demonstrate the knowledge and ability to	
C705.1	Describe various IoT enabled technologies.

C705.2	Understand the concepts of M2M with necessary protocols.
C705.3	Illustrate Python programming for IoT
C705.4	Examine the Python programming with Raspberry PI
C705.5	Design web applications for IoT

B.TECH (CSE) IV YEAR I SEMESTER: IMAGE PROCESSING

After completing this course the student must demonstrate the knowledge and ability to	
C705.1	Understand Digital image fundamentals.
C705.2	Program Image Transformations,
C705.3	Design Colour Image Processing and Restoration,
C705.4	Implement Image segmentation techniques.
C705.5	Program Image Compression techniques.

B.TECH (CSE) IV YEAR I SEMESTER: ADVANCED DATABASES

After completing this course the student must demonstrate the knowledge and ability to	
C706.1	Understand the concepts of Distributed Database Systems.
C706.2	Identify different Architectural Models for Distributed DBMS.
C706.3	Characterize the query processors.
C706.4	Design Algorithms for Concurrency control Mechanisms.
C706.5	Decide different Parallel DBMS Techniques based on given

B.TECH (CSE) IV YEAR I SEMESTER: COMPUTER GRAPHICS

After completing this course the student must demonstrate the knowledge and ability to	
C706.1	Understand the AREAS OF Computer Graphics.
C706.2	Analyze 2 – D Geometrical transforms.
C706.3	Analyze 3 – D Geometrical transforms.
C706.4	Apply different visible surface detection methods.
C706.5	Design of animation sequence.

B.TECH (CSE) IV YEAR I SEMESTER: SOFTWARE TESTING METHODOLOGIES

After completing this course the student must demonstrate the knowledge and ability to

C707.1	Understand the purpose of Software testing.
C707.2	Outline various transaction flow testing techniques.
C707.3	Understand domain testing.
C707.4	Construct decision tables for Logic Based Testing.
C707.5	Implement node reduction algorithm.

B.TECH (CSE) IV YEAR I SEMESTER: INTRODUCTION TO MAT LAB

After completing this course the student must demonstrate the knowledge and ability to	
C708.1	Break down computational problems into a series of simple steps.
C708.2	Create programs in the MATLAB language for engineering applications.
C708.3	Appraise and get familiarized with the visualization techniques.
C708.4	Familiarized with Different application tools required for different area of domain.
C708.5	Expose to the common algorithms and techniques that are the building blocks of MATLAB.

B.TECH (CSE) IV YEAR I SEMESTER: CIRCUIT SIMULATION USING PSPICE

After completing this course the student must demonstrate the knowledge and ability to	
C709.1	Describe circuits for PSpice simulation.
C709.2	Understand the types of DC TO AC and their output variable analysis.
C709.3	Understand the response of transient analysis and obtain their output variables.
C709.4	Analyze simulation circuit for different applications.
C709.5	Develop simulation circuit for different applications.

B.TECH (CSE) IV YEAR I SEMESTER: ENERGY STORAGE SYSTEMS

After completing this course the student must demonstrate the knowledge and ability to	
C710.1	Understand Electrical Energy Storage Technologies.
C710.2	Understand the needs for electric energy storage.
C710.3	Analyze the characteristics and features of energy from various sources.
C710.4	Classify various types of energy storage and various devices used for the purpose.
C710.5	Apply the same concepts to real time solutions like electric vehicles, smart Grid and SCADA etc.

B.TECH (CSE) IV YEAR I SEMESTER: ELECTRICAL VEHICLE & HYBRID VEHICLE

After completing this course the student must demonstrate the knowledge and ability to

C711.1	Understand the components of electric vehicles and fundamentals of electric vehicles.
C711.2	Understand the types of batteries and principles of operation of Batteries.
C711.3	Understand the basic principles of electric motors which can be used in electric vehicles.
C711.4	Understand the transmission of the drive system and the components of transmission.
C711.5	Understand the concepts of hybrid vehicles and analyze the performance of hybrid vehicles.

B.TECH (CSE) IV YEAR I SEMESTER: OPTIMIZATION TECHNIQUES

After completing this course the student must demonstrate the knowledge and ability to	
C712.1	Understanding the concepts of optimization techniques.
C712.2	Compute the minimum transportation cost by different methods.
C712.3	Analyzing the waiting lines in terms of Queuing theory parameters.
C712.4	Applying the costing principles in identifying the minimum inventory.
C712.5	Evaluating the simulation process for various OR models.

B.TECH (CSE) IV YEAR I SEMESTER: MAINTENANCE AND SAFETY ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C713.1	Understanding the need for maintenance of a machine in an industry.
C713.2	Identifying various maintenance policies.
C713.3	Analyzing the cost and time concepts while implementing the maintenance.
C713.4	Evaluating the quality concepts for safety and maintenance of equipment.
C713.5	Appreciating the terms reliability and maintainability with reference the maintenance of an equipment.

B.TECH (CSE) IV YEAR I SEMESTER: ELEMENTS OF CIVIL ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to	
C714.1	Understand Geological properties and Geotechnical aspect of civil engineering.
C714.2	Plan the concept of different building byelaws and planning principles.
C714.3	Analyse the concept of stress-strain and to identify the properties of the fluid changes treatment process.
C714.4	Apply modern tools of surveying and understand basic concepts of concrete.
C714.5	Evaluate the principles of highway geometric designs and types of pavements as per IRC standards.

B.TECH (CSE) IV YEAR I SEMESTER: INTRODUCTION TO EARTHQUAKE ENGINEERING

After completing this course the student must demonstrate the knowledge and ability to

C715.1	Understand the Interior Earth' surface, fault attenuation, different wave propagation in Earthquake events.
C715.2	Classify different earthquake hazards and its effects.
C715.3	Examine the mechanical behavior of earth surface and its significance.
C715.4	Evaluate the quantification of Hazard effects - approach methods.
C715.5	Predict the vibration motion and how it influences the earth's surface.

B.TECH (CSE) IV YEAR I SEMESTER: FUNDAMENTALS OF ENTREPRENEURSHIP

After completing this course the student must demonstrate the knowledge and ability to	
C716.1	To provide awareness about entrepreneurship.
C716.2	To develop idea generation, creative and innovative skills among students.
C716.3	To self-motivate the students by making aware of different opportunities by exploring themselves by discussing successful growth/failure stories.
C716.4	To learn to start an enterprise and design business plans those are suitable for funding by considering all dimensions of business.
C716.5	To understand entrepreneurial process by way of studying different case studies.

B.TECH (CSE) IV YEAR I SEMESTER: MOBILE APPLICATION DEVELOPMENT LAB

After completing this course the student must demonstrate the knowledge and ability to	
C717.1	Understand the concept of J2ME.
C717.2	Design a User interface for a mobile application using J2ME.
C717.3	Create a mobile application for small computing devices.
C717.4	Apply the concepts of JDBC & Embedded SQL for Database Connection.
C717.5	Understand the generic connection framework.

B.TECH (CSE) IV YEAR I SEMESTER: HADOOP & BIG DATA LAB

After completing this course the student must demonstrate the knowledge and ability to	
C718.1	Understand java programs required for developing map reduce programs in Hadoop.
C718.2	Analyze Installation of Hadoop environment and learn Unix file system commands.
C718.3	Impart Knowledge of map reduce paradigm to solve complex problems.
C718.4	Implement best practices Hadoop programming tool PIG in Hadoop ecosystem.

C718.5	Apply HIVE scripting in Hadoop eco system.

B.TECH (CSE) IV YEAR I SEMESTER: INTERNET OF THINGS LAB

After completing this course the student must demonstrate the knowledge and ability to	
C719.1	Describe various IoT enabled technologies.
C719.2	Understand the concepts of M2M with necessary protocols.
C719.3	Illustrate Python programming for IoT.
C719.4	Examine the Python programming with Raspberry PI.
C719.5	Design web applications for IoT.

B.TECH (CSE) IV YEAR II SEMESTER: DESIGN PATTERNS

After completing this course the student must demonstrate the knowledge and ability to	
C801.1	Understand the Design patterns in software applications
C801.2	Discuss the Creational Patterns
C801.3	Categorize the Structural Pattern
C801.4	Investigate Behavioral Patterns
C801.5	Construct the good design pattern structures

B.TECH (CSE) IV YEAR II SEMESTER: E-COMMERCE

After completing this course the student must demonstrate the knowledge and ability to	
C802.1	Identify the anatomy of E-commerce applications.
C802.2	Categorize different electronic payment systems.
C802.3	Examine supply chain management.
C802.4	Analyze the various marketing strategies for an online business.
C802.5	Design strategies for E-commerce catalogues.

B.TECH (CSE) IV YEAR II SEMESTER: SEMANTIC WEB & SOCIAL NETWORKS

After completing this course the student must demonstrate the knowledge and ability to	
C803.1	Understand knowledge representation for the Semantic Web Intelligence.
C803.2	Identify the role of Ontologies in the semantic web.

C803.3	Learn Ontology Engineering.
C803.4	Develop Semantic Web Applications and Services.
C803.5	Create OWL-S Ontology for Web Services.