



# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, Affiliated to Anna University, Chennai, India)

Kaikkurichi, Pudukkottai – 622 303

DEPARTMENT OF INFORMATION TECHNOLOGY

REGULATION 2013

B.Tech IT- COURSE OUTCOMES (CO)

<b>I SEMESTER</b>	
<b>HS6151 TECHNICAL ENGLISH</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Apply the collaborative and social aspects of research and writing processes.
<b>CO2</b>	Comprehend that research and writing is a series of tasks, including accessing, retrieving, evaluating, analyzing and synthesizing appropriate data and information from sources that vary in content, format, structure and scope.
<b>CO3</b>	Use appropriate technologies to organize, present and communicate information to address a range of audiences, purpose and genres.
<b>CO4</b>	Design the multidisciplinary settings to manage projects as an individual, as a member or leader after taking the exercises like role-play, group discussion and making presentations.
<b>CO5</b>	Model the life-long learning methods suitable for all the environments committed to professional ethics and responsibilities after inculcating the habit of reading and writing.
<b>CO6</b>	Analyze and identify the root for effective managerial skills through different spoken discourse and excerpts.
<b>MA6151 MATHEMATICS-I</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Describe a clear idea of matrix algebra pertaining eigen values and eigen vectors in addition dealing with quadratic forms.
<b>CO2</b>	Learn infinite series and their convergence and acquire the knowledge of with limitations.
<b>CO3</b>	Use infinite series approximations for solutions arising in mathematical modeling.
<b>CO4</b>	Explain and characterize phenomena which evolve around circle of curvature and envelope.
<b>CO5</b>	Extend the function of a one variable to several variables. Multivariable functions of real variables arise inevitable in engineering.
<b>CO6</b>	Extend to double and triple integration so that they can handle integrals of higher order which are applied engineering field.
<b>PH6151 ENGINEERING PHYSICS-I</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Classify the Bravais lattices and different types of crystal structures and growth technique.
<b>CO2</b>	Demonstrate the properties of elasticity and heat transfer through objects.
<b>CO3</b>	Explain black body radiation, properties of matter waves and Schrodinger wave equations.
<b>CO4</b>	Describe and analyzing the quantum nature of radiation and matter to solve the real time societal and technological problems.
<b>CO5</b>	Illustrate the acoustic requirements, production and application of ultrasonics.
<b>CO6</b>	Examine the characteristics of laser and optical fiber.
<b>CY6151 ENGINEERING CHEMISTRY-I</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Classify the polymers, different polymerization techniques and its uses.
<b>CO2</b>	Describe the laws of thermodynamics, various thermodynamics functions and their significance.
<b>CO3</b>	Explain the photo physical processes and the components of analytical instruments.
<b>CO4</b>	Illustrate the phase diagrams, alloys and heat treatment processes
<b>CO5</b>	Discuss the synthesis, characteristics and the applications of nano materials.
<b>CO6</b>	Create the knowledge of nonmaterial's and their applications in fields like medicinal, electrical, electronic, chemical, etc.



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<b>GE6151 COMPUTER PROGRAMMING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain the basic organization of computers, the number systems and write the pseudo code for algorithms and flow chart.
<b>CO2</b>	Develop 'C' programming fundamentals, looping statements and solve problems.
<b>CO3</b>	Design 'C' programs for arrays and strings.
<b>CO4</b>	Use functions with pass by value and reference, pointers in programs.
<b>CO5</b>	Develop coding in 'C' for structures and unions with storage classes and pre-processor.
<b>CO6</b>	Design and execute C programs for simple applications.
<b>GE6152 ENGINEERING GRAPHICS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Construct the conic sections and special curves and outline their practical applications and sketch the orthographic views from pictorial views and models.
<b>CO2</b>	Apply the principles of orthographic projections of points in all quadrants, lines and planes in first quadrant.
<b>CO3</b>	Draw the projections of simple solids like prisms, pyramids, cylinder and cone and obtain the traces of plane figures.
<b>CO4</b>	Design the sectional views of solids like cube, prisms, pyramids, cylinders & cones and Development of its lateral surfaces.
<b>CO5</b>	Apply the principles of isometric projection and perspective projection of simple solids and truncated prisms, pyramids, cone and cylinders.
<b>CO6</b>	Build an engineering component using Paper drawing as well as in CAD.
<b>GE6161 COMPUTER PRACTICES LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Prepare data using MS-word & Excel to visualize graphs, charts in MS-Excel.
<b>CO2</b>	Outline the given problem using flowchart and to program using Switch case & Control structures.
<b>CO3</b>	Develop the code using decision making & looping statements.
<b>CO4</b>	Apply passing parameters using Arrays & Functions.
<b>CO5</b>	Use structure and Union for a given database and to bring out the importance of Unions over structure.
<b>CO6</b>	Design and implement C programs for simple applications.
<b>GE6162 ENGINEERING PRACTICES LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Draw pipe line plan; lay and connect various pipe fittings used in common household plumbing work; Saw; plan;
<b>CO2</b>	Explain various joints in wood materials used in common household wood work.
<b>CO3</b>	Design various wire electrical joints in common household electrical wire work.
<b>CO4</b>	Weld various joints in steel plates using arc welding work; Machine various simple processes like turning, drilling, tapping in parts; Assemble simple mechanical assembly of common household equipments.
<b>CO5</b>	Solder and test simple electronic circuits; Assemble and test simple electronic components on PCB.
<b>CO6</b>	Design a tray out of metal sheet using sheet metal work.



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II SEMESTER	
<b>GE6163 PHYSICS AND CHEMISTRY LABORATORY-I</b>	
<b>Students will be able to</b>	
<b>CO1</b>	To apply the physics principles of Thermal physics and Properties of Matter to evaluate properties of materials.
<b>CO2</b>	Evaluate the wavelength of spectral lines using spectrometer, the wavelength of laser, particle size, acceptance angle of an optical fiber using semiconductor diode laser and the thickness of a thin wire through interference fringes using Air wedge apparatus.
<b>CO3</b>	Appraise the velocity of sound and compressibility of the liquid using ultrasonic interferometer and thermal conductivity for bad conductors using Lee's disc apparatus.
<b>CO4</b>	Determine the DO content in water sample by winkler's method and molecular weight of polymer by Ostwald viscometer.
<b>CO5</b>	Find the strength of an acid using pH meter and conducto meter.
<b>CO6</b>	Estimate the amount of weak and strong acids in a mixture by conducto meter.
<b>MA6251 MATHEMATICS-II</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Solve ordinary differential equations that model most of the engineering problems.
<b>CO2</b>	Acquaint the concepts of vector calculus-like Gradient, Divergence, Curl, Directional derivative, Irrotational vector and Solenoidal vector.
<b>CO3</b>	Make to appreciate the purpose of using transforms to create new domain in which it is easier to handle the problem that is being investigated.
<b>CO4</b>	Develop an Explaining of the standard techniques of complex variable and mapping so as to enable the student to apply them with confidence, in application areas such as heat conduction, elasticity, fluid dynamics and flow of electric current.
<b>CO5</b>	Expose to the concept of Cauchy's integral theorem, Taylor, Laurent expansions and Singular points.
<b>CO6</b>	Use Application of residue theorem to evaluate complex integrals.
<b>HS6251 TECHNICAL ENGLISH-II</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Speak clearly, confidently, comprehensibly, and communicate with one or many listeners using appropriate communicative strategies.
<b>CO2</b>	Define the impact of the professional engineering solution in societal and environmental contexts with the help of the basic grammar taught to communicate effectively and confidently.
<b>CO3</b>	Write cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
<b>CO4</b>	Read different genres of texts adopting various reading strategies.
<b>CO5</b>	Listen/view and comprehend different spoken discourses/excerpts in different accents.
<b>CO6</b>	Recognize, understand, and analyze the context within which language, information, and knowledge are produced, managed, organized, and disseminated
<b>PH6251 ENGINEERING PHYSICS - II</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Illustrate classical and quantum free electron theory and calculate carrier concentration in metals.
<b>CO2</b>	Describe the carrier concentration in semi conductors and identify the p-type and n-type semi conductor using hall effect.
<b>CO3</b>	Illustrate the special material properties such as magnetism.



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CO4	Discuss the super conductivity.
CO5	Explain the dielectrics, types of polarization, losses and breakdown
CO6	Discuss the properties, preparation and applications of metallic alloys, SMA, nano materials, NLO, Bio-materials.

## CY6251 ENGINEERING CHEMISTRY-II

Students will be able to

CO1	Explain the problems of using hard water in boilers and the methods of treatment of water for boiler use.
CO2	Design the electrochemical cells and to identify the types of corrosion and the methods of preventing.
CO3	Illustrate the methods of harnessing energy from non-conventional energy sources.
CO4	Classify various engineering materials and their importance.
CO5	Relate the significance of solid, liquid and gaseous fuels and to calculate the calorific values of fuels and the requirement of air for combustion in furnaces.
CO6	Analyze issues related to fuels and their synthesis and able to understand working of IC and diesel engines.

## CS6201 DIGITAL PRINCIPLES AND SYSTEM DESIGN

Students will be able to

CO1	Perform arithmetic operations in any number system..
CO2	Explain the basics of Boolean algebra
CO3	Simplify the Boolean expression using K-Map and Tabulation techniques.
CO4	Use boolean simplification techniques to design a combinational hardware circuit.
CO5	Design and Analysis of a given digital circuit – combinational and sequential.
CO6	Design using PLD

## CS6202 PROGRAMMING AND DATA STRUCTURES I

Students will be able to

CO1	Explain the basics of C programming.
CO2	Use the conditional and control statements of C appropriately for problems.
CO3	Distinguish the usage of Structures and Unions
CO4	Implement abstract data types for linear data structures.
CO5	Apply the different linear data structures to problem solutions.
CO6	Critically analyze the various algorithms like sorting, searching etc.,

## GE6262 PHYSICS AND CHEMISTRY LABORATORY

Students will be able to

CO1	Appraise the Young's modulus of the beam by uniform and non uniform bending method, the moment of inertia and Rigidity Modulus for thin wire using Torsion Pendulum.
CO2	Use Poiseuille's method for determining the coefficient of viscosity of the liquid
CO3	Estimate the refractive index of spectral lines for determining the dispersive power of a prism circuit.
CO4	Determine the type, amount of alkalinity, hardness in a given water sample.
CO5	Evaluate the amount of copper using EDTA method.
CO6	Examine the potentiometric redox titration and Conductometric precipitation titration.

## IT6211 DIGITAL LABORATORY

Students will be able to

CO1	Evaluate the basic gates using boolean theorms
CO2	Use boolean simplification techniques to design a combinational hardware circuit.



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<b>CO3</b>	Design and Implement combinational and sequential circuits.
<b>CO4</b>	Analyze a given digital circuit – combinational and sequential.
<b>CO5</b>	Design the different functional units in a digital computer system.
<b>CO6</b>	Design and Implement a simple digital system.
<b>IT6212PROGRAMMING AND DATA STRUCTURES LABORATORY I</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement C programs for implementing stacks, queues, and linked lists.
<b>CO2</b>	Apply good programming design methods for program development
<b>CO3</b>	Illustration of usage of files
<b>CO4</b>	Apply the different data structures for implementing solutions to practical problems
<b>CO5</b>	Develop searching and sorting programs
<b>CO6</b>	Develop searching and sorting programs.
<b>SEMESTER III</b>	
<b>MA6351 TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Develop boundary value problem using Fourier series analysis.
<b>CO2</b>	Explain about the higher order LPDE
<b>CO3</b>	Develop the complex form of Fourier series
<b>CO4</b>	Develop mathematical tools for the solutions of partial differential equations
<b>CO5</b>	Apply Fourier transform techniques used in wide variety of Situations
<b>CO6</b>	Develop Z transform techniques for discrete time systems.
<b>CS6301PROGRAMMING AND DATA STRUCTURES II</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design problem solutions using Object Oriented Techniques
<b>CO2</b>	Apply the concepts of data abstraction, encapsulation and inheritance for problem solutions.
<b>CO3</b>	Use the control structures of C++ appropriately.
<b>CO4</b>	Critically analyse the various algorithms.
<b>CO5</b>	Apply the linear data structures to problem solutions.
<b>CO6</b>	Apply the non-linear data structures to problem solutions.



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<b>CS6302 DATABASE MANAGEMENT SYSTEM</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design Databases for applications.
<b>CO2</b>	Use the Relational model, ER diagrams.
<b>CO3</b>	Apply concurrency control and recovery mechanisms for practical problems.
<b>CO4</b>	Design the Query Processor and Transaction Processor.
<b>CO5</b>	Apply advanced concepts in databases.
<b>CO6</b>	Apply security concepts to databases.
<b>CS6303 COMPUTER ARCHITECTURE</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Analyze the concept of instructions
<b>CO2</b>	Design arithmetic and logic unit.
<b>CO3</b>	Design and analyze pipelined control units
<b>CO4</b>	Evaluate performance of memory systems.
<b>CO5</b>	Understand parallel processing architectures
<b>CO6</b>	Understand the concept of I/O systems
<b>CS6304 ANALOG AND DIGITAL COMMUNICATION</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Apply analog communication techniques
<b>CO2</b>	Apply digital communication techniques
<b>CO3</b>	Use data communication techniques
<b>CO4</b>	Use pulse communication techniques
<b>CO5</b>	Analyze Source and Error control coding.
<b>CO6</b>	Utilize multi-user radio communication.
<b>GE6351 ENVIRONMENTAL SCIENCE AND ENGINEERING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Finding and implementing scientific, technological solutions to environmental problems
<b>CO2</b>	Finding and implementing economic and political solutions to environmental problems
<b>CO3</b>	Discuss about interrelationship between living organism and environment.
<b>CO4</b>	Describe about the surrounding environment, its functions and its value
<b>CO5</b>	Explain about dynamic process and features of earth's interior surface
<b>CO6</b>	Learn about natural resources, pollution control and waste management



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<b>IT6311 PROGRAMMING AND DATA STRUCTURES LABORATORY II</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement C++ programs for manipulating constructors, destructors and copy constructors
<b>CO2</b>	Design and implement C++ programs for manipulating friend function, friend class, inheritance, polymorphism
<b>CO3</b>	Design and implement C++ programs for manipulating stacks, queues, linked lists, trees, and Graphs.
<b>CO4</b>	Apply good programming design methods for program development.
<b>CO5</b>	Apply the different data structures for implementing solutions to practical problems.
<b>CO6</b>	Develop recursive programs using trees and graphs..
<b>IT6312 DATABASE MANAGEMENT SYSTEMS LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement a database schema for a given problem-domain
<b>CO2</b>	Populate and query a database
<b>CO3</b>	Create and maintain views, Synonyms, Sequence, Indexes, Save point.
<b>CO4</b>	Analyze relationship between database
<b>CO5</b>	Create and maintain tables using PL/SQL.
<b>CO6</b>	Prepare reports.
<b>IT6313 DIGITAL COMMUNICATION LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Learn about Signal sampling
<b>CO2</b>	Explain about various modulation
<b>CO3</b>	Design program using MATLAB
<b>CO4</b>	Describe simulation of Shift Key Modulation
<b>CO5</b>	Develop the scheme to control the error
<b>CO6</b>	Develop the simulation about spread spectrum
<b>MA6453 PROBABILITY AND QUEUEING THEORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain the fundamental knowledge of the probability concepts.
<b>CO2</b>	Describe phenomenon which evolve with respect to time in a probabilistic manner..
<b>CO3</b>	Explain how to usage of covaraince, distribution.
<b>CO4</b>	Describe about the different random process model.
<b>CO5</b>	Acquire skills in analyzing queuing models.
<b>CO6</b>	Detail about the queuing model in advanced method



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<b>EC6504 MICROPROCESSOR AND MICROCONTROLLER</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement programs on 8086 microprocessor.
<b>CO2</b>	Explain about the Bus Structure in Micro Processor
<b>CO3</b>	Design I/O circuits.
<b>CO4</b>	Discuss about usage of i/o circuits in real time application
<b>CO5</b>	Design and implement 8051 microcontroller based systems
<b>CO6</b>	Design Memory Interfacing circuits.
<b>CS6402 DESIGN AND ANALYSIS OF ALGORITHMS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Learn about basics of algorithm with its notation
<b>CO2</b>	Analyze the time and space complexity of algorithms.
<b>CO3</b>	Design the algorithm for sorting and searching methods
<b>CO4</b>	Critically analyze the different algorithm design techniques using dynamic and greedy technique
<b>CO5</b>	Design algorithms for various computing problems..
<b>CO6</b>	Modify existing algorithms to improve efficiency.
<b>CS6401 OPERATING SYSTEMS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design algorithms for various computing problems.
<b>CO2</b>	Apply the principles of concurrency.
<b>CO3</b>	Design deadlock, prevention and avoidance algorithms.
<b>CO4</b>	Compare and contrast various memory management schemes.
<b>CO5</b>	Design and Implement a prototype file systems.
<b>CO6</b>	Perform administrative tasks on Linux Servers.
<b>CS6403 SOFTWARE ENGINEERING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Identify the key activities in managing a software project.
<b>CO2</b>	Compare different process models.
<b>CO3</b>	Concepts of requirements engineering and Analysis Modeling.
<b>CO4</b>	Develop the architectural design for software
<b>CO5</b>	Compare and contrast the various testing.
<b>CO6</b>	Description of how to manage the software development





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<b>T6411MICROPROCESSOR ANDMICROCONTROLLER LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Write ALP Programmes for fixed and Floating Point and Arithmetic
<b>CO2</b>	Interface different I/Os with processor
<b>CO3</b>	Generate waveforms using Microprocessors.
<b>CO4</b>	Execute Programs in 8051.
<b>CO5</b>	Explain the difference between simulator and Emulator
<b>CO6</b>	Working with MASM
<b>IT6412OPERATING SYSTEMS LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Implement deadlock avoidance, and Detection Algorithms
<b>CO2</b>	Compare the performance of various CPU Scheduling Algorithm
<b>CO3</b>	Critically analyze the performance of the various page replacement algorithms
<b>CO4</b>	Create processes and implement IPC
<b>CO5</b>	Develop the program in C using system calls.
<b>CO6</b>	Detail about shell programming
<b>IT6413 SOFTWARE ENGINEERING LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Use open source case tools to develop software
<b>CO2</b>	Analyze and design software requirements in efficient manner
<b>CO3</b>	Compare the software engineering methodologies for project development.
<b>CO4</b>	Develop the architectural design for software
<b>CO5</b>	Compare and contrast the various testing .
<b>CO6</b>	Description of how to manage the software development
<b>HS8461ADVANCED READING AND WRITING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Discuss the concept of PCM systems
<b>CO2</b>	Describe the various waveform coding schemes and their performance
<b>CO3</b>	Match and implement baseband transmission schemes
<b>CO4</b>	Select and implement band pass signaling schemes
<b>CO5</b>	Demonstrate the spectral characteristics of band pass signaling schemes and their noise performance
<b>CO6</b>	Design error control coding schemes



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<b>SEMESTER V</b>	
<b>CS6551COMPUTER NETWORKS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Identify the components required to build different types of networks
<b>CO2</b>	Choose the required functionality at each layer for given application
<b>CO3</b>	Identify solution for each functionality at each layer
<b>CO4</b>	Explain different routing techniques
<b>CO5</b>	Trace the flow of information from one node to another node in the network
<b>CO6</b>	Explain the different protocols used at application layer i.e. SMTP, POP3, IMAP,MIME,SNMP,DNS etc
<b>IT6501GRAPHICS AND MULTIMEDIA</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Effectively and creatively solve a wide range of graphic design problems
<b>CO2</b>	Form effective and compelling interactive experiences for a wide range of audiences.
<b>CO3</b>	Use various software programs used in the creation and implementation of multi-media (interactive, motion/animation, presentation, etc.).
<b>CO4</b>	Explain different file handling techniques in multimedia
<b>CO5</b>	Discuss issues related to emerging electronic technologies and graphic design
<b>CO6</b>	Explain the different messaging techniques in multimedia
<b>CS6502OBJECT ORIENTED ANALYSIS AND DESIGN</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain the basics of Object oriented analysis and design
<b>CO2</b>	Design and implement projects using OO concepts
<b>CO3</b>	Use the UML analysis and design diagrams
<b>CO4</b>	Apply appropriate design patterns
<b>CO5</b>	Create code from design.
<b>CO6</b>	Compare and contrast various testing techniques
<b>T6502 DIGITAL SIGNAL PROCESSING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Discuss the basics of fourier transforms.
<b>CO2</b>	Perform frequency transforms for the signals.
<b>CO3</b>	Design IIR and FIR filters.
<b>CO4</b>	Finite word length effects in digital filters
<b>CO5</b>	Implement different frequency sampling techniques
<b>CO6</b>	Explain the fixed and floating point numbers representations



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<b>IT6503 WEB PROGRAMMING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design web pages.
<b>CO2</b>	Use technologies of Web Programming.
<b>CO3</b>	Apply object oriented aspects to Scripting.
<b>CO4</b>	Create databases with connectivity using JDBC.
<b>CO5</b>	Build web based application using sockets.
<b>CO6</b>	Explain the working and services of XML.
<b>EC6801 WIRELESS COMMUNICATION</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Characterize wireless channels
<b>CO2</b>	Design and implement various signaling schemes for fading channels
<b>CO3</b>	Design a cellular system
<b>CO4</b>	Compare multipath mitigation techniques and analyze their performance
<b>CO5</b>	Design systems with transmit/receive diversity and MIMO systems and analyze their performance
<b>CO6</b>	Implement the systems with transmit/receive diversity and MIMO systems and analyze their performance
<b>IT6511 NETWORKS LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Use simulation tools
<b>CO2</b>	Implement the various protocols.
<b>CO3</b>	Analyze the performance of the protocols in different layers.
<b>CO4</b>	Describe the various routing algorithms
<b>CO5</b>	Detail about socket programming.
<b>CO6</b>	Explain about network commands
<b>IT6512 WEB PROGRAMMING LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design Web pages using HTML/DHTML and style sheets
<b>CO2</b>	Design Web pages using style sheets
<b>CO3</b>	Design and Implement database applications.
<b>CO4</b>	Create dynamic web pages using server side scripting.
<b>CO5</b>	Write Client Server applications..
<b>CO6</b>	Implement RMI concept



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B.Tech IT- COURSE OUTCOMES (CO)

<b>IT6513 CASE TOOLS LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement projects using OO concepts.
<b>CO2</b>	How to map design to code.
<b>CO3</b>	Use the UML analysis and design diagrams.
<b>CO4</b>	Apply appropriate design patterns.
<b>CO5</b>	Create code from design.
<b>CO6</b>	Compare and contrast various testing techniques.
<b>SEMESTER VI</b>	
<b>CS6601 DISTRIBUTED SYSTEM</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Discuss trends in Distributed Systems
<b>CO2</b>	Apply network virtualization
<b>CO3</b>	Apply remote method invocation and objects.
<b>CO4</b>	Explain the ideas behind the peer to peer and file system
<b>CO5</b>	Analyze about Synchronization in Distributed Systems
<b>CO6</b>	Design process and resource management systems.
<b>IT6601 MOBILE COMPUTING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain the basics of mobile telecommunication system
<b>CO2</b>	Choose the required functionality at each layer for given application.
<b>CO3</b>	Description of the services provided in network layer and transport layer.
<b>CO4</b>	Identify solution for each functionality at each layer.
<b>CO5</b>	Use simulator tools and design Ad hoc networks.
<b>CO6</b>	Develop a mobile application.
<b>CS6659 ARTIFICIAL INTELLIGENCE</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Identify problems that are amenable to solution by AI methods.
<b>CO2</b>	Identify appropriate AI methods to solve a given problem.
<b>CO3</b>	Formalize a given problem in the language/framework of different AI methods.
<b>CO4</b>	Implement basic AI algorithms.
<b>CO5</b>	Design an empirical evaluation of different algorithms on a problem formalization
<b>CO6</b>	Carry out an empirical evaluation of different algorithms on a problem formalization



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B.Tech IT- COURSE OUTCOMES (CO)

<b>CS6660 COMPILER DESIGN</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and implement a prototype compiler
<b>CO2</b>	Analyze the Conversion of Regular Expression to Automata
<b>CO3</b>	Design and implement a parser
<b>CO4</b>	Identify the SDD and implement the Type Systems.
<b>CO5</b>	In detail about the storage Organization
<b>CO6</b>	Apply the various optimization techniques
<b>IT6602 SOFTWARE ARCHITECTURES</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain influence of software architecture on business activities
<b>CO2</b>	Explain influence of software architecture on technical activities
<b>CO3</b>	Describe about attributes in Qualities
<b>CO4</b>	Identify key architectural structures
<b>CO5</b>	Use styles and views to specify architecture
<b>CO6</b>	Design document for a given architecture
<b>GE6757 TOTAL QUALITY MANAGEMENT</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain the basics of Total Quality Management
<b>CO2</b>	Elaborate key concepts of Customer satisfaction
<b>CO3</b>	Learn about the principles and improvement process
<b>CO4</b>	Describe about traditional tools for quality
<b>CO5</b>	Identify the sigma concepts for quality function development
<b>CO6</b>	Explain the key constraints for Quality Systems
<b>IT6611 MOBILE APPLICATION DEVELOPMENT LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Design and Implement various mobile applications using emulators.
<b>CO2</b>	Know the components and structure of mobile application development frameworks for Android OS based mobiles
<b>CO3</b>	Know the components and structure of mobile application development frameworks for windows OS based mobiles.
<b>CO4</b>	How to work with various mobile application development frameworks
<b>CO5</b>	Design concepts and issues of development of mobile applications.
<b>CO6</b>	Deploy applications to hand-held devices



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<b>IT6612 COMPILER LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Implement the different Phases of compiler using tools
<b>CO2</b>	Analyze the control flow and data flow of a typical program
<b>CO3</b>	Usage of the LEX and YACC tools
<b>CO4</b>	Implement the strategies for storage allocation.
<b>CO5</b>	Optimize a given program
<b>CO6</b>	Generate an assembly language program equivalent to a source language program
<b>GE6674 COMMUNICATION AND SOFT SKILLS LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	To be totally learner-centric with minimum teacher intervention as the course revolves around practice
<b>CO2</b>	Suitable audio/video samples from Podcast/YouTube to be used for illustrative purposes.
<b>CO3</b>	Portfolio approach for writing to be followed. Learners are to be encouraged to blog, tweet, text and email employing appropriate language
<b>CO4</b>	GD/Interview/Role Play/Debate could be conducted off the laboratory (in a regular classroom)
<b>CO5</b>	Expose to telephonic interview and video conferencing.
<b>CO6</b>	Learners are to be assigned to read/write/listen/view materials outside the classroom as well for gaining proficiency and better participation in the class.
<b>SEMESTER VII</b>	
<b>IT6701 INFORMATION MANAGEMENT</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Determine the basics of managing the information
<b>CO2</b>	Analyze core relational database topics including logical and physical design and modeling
<b>CO3</b>	Infer the depth knowledge about complex information system that meets regulatory requirements
<b>CO4</b>	Design, Create and maintain data warehouses.
<b>CO5</b>	Design, create and maintain data warehouses.
<b>CO6</b>	Learn recent advances in NoSQL, Big Data and related tools.
<b>CS6701 CRYPTOGRAPHY AND NETWORK SECURITY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Explain various encryption techniques and the basics of number theory and apply algorithm to test the numbers
<b>CO2</b>	Use block cipher methods to calculate the ciphers summarize public key cryptography
<b>CO3</b>	Discuss authentication algorithm and apply various authentication functions and secure algorithms.
<b>CO4</b>	Evaluate firewall rules and policy setup implementations
<b>CO5</b>	Design secure applications
<b>CO6</b>	Inject secure coding in the development applications



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<b>IT6702 DATA WARE HOUSING AND DATA MINING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Describe data ware house concepts and architecture.
<b>CO2</b>	Classify the various OLAP types
<b>CO3</b>	Define data mining and list out the types in data mining.
<b>CO4</b>	Make use of tools and techniques for associating rule mining and classification
<b>CO5</b>	Compare and contrast the various classifiers.
<b>CO6</b>	Compare the various clustering method in Data mining.
<b>CS6703 GRID AND CLOUD COMPUTING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Use of the basics of distributed computing and grid
<b>CO2</b>	Apply grid computing techniques to solve large scale scientific problems
<b>CO3</b>	Apply the concept of virtualization
<b>CO4</b>	List out the deployment models of cloud
<b>CO5</b>	Use the grid and cloud tool kits
<b>CO6</b>	Apply the security models in the grid and the cloud environment
<b>CS6003 AD HOC AND SENSOR NETWORKS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Detail about the needs of wireless Adhoc and sensor network in current scenario of technology
<b>CO2</b>	Explain the concepts, network architectures and applications of ad hoc and wireless sensor networks
<b>CO3</b>	Analyze the protocol design issues of ad hoc and sensor networks
<b>CO4</b>	Design routing protocols for ad hoc and wireless sensor networks with respect to some protocol with design issues
<b>CO5</b>	Detail about how various signal processing and coding techniques combat channel un certainties
<b>CO6</b>	Evaluate the QoS related performance measurements of ad hoc and sensor networks.
<b>IT6711 DATA MINING LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Apply data mining techniques
<b>CO2</b>	Apply the methods to large data sets
<b>CO3</b>	Use data mining tools
<b>CO4</b>	Compare the various classifiers
<b>CO5</b>	Contrast the various classifier
<b>CO6</b>	Analyze the Data Mining Techniques



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<b>IT6712 SECURITY LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Implement the cipher techniques
<b>CO2</b>	Implement the Encryption techniques
<b>CO3</b>	Develop the various security algorithms
<b>CO4</b>	Learn about secure data transfer
<b>CO5</b>	Use different open source tools for network security
<b>CO6</b>	Analysis different open source tools for network security
<b>IT6713 GRID AND CLOUD COMPUTING LABORATORY</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Use the grid and cloud tool kits
<b>CO2</b>	Apply the Virtualization
<b>CO3</b>	Design applications on the Grid
<b>CO4</b>	Implement applications on the Grid
<b>CO5</b>	Design applications on the Cloud.
<b>CO6</b>	Implement applications on the Cloud.
<b>IT6801 SERVICE ORIENTED ARCHITECTURE</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Build applications based on XML
<b>CO2</b>	Develop web services using technology elements
<b>CO3</b>	Explain about the key principles behind SOA
<b>CO4</b>	Build SOA-based applications for intra-enterprise and inter-enterprise applications
<b>CO5</b>	Determine web services technology elements for realizing SOA
<b>CO6</b>	Apply the various web service standards
<b>GE6075 PROFESSIONAL ETHICS IN ENGINEERING</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Describe basic purpose of profession, professional ethics And various moral and social issues
<b>CO2</b>	Outline of professional right sand responsibilities of a Engineer, safety and risk benefit analysis of a Engineer
<b>CO3</b>	Utilize acquiring knowledge of various roles of Engineer In applying ethical principles at various professional levels
<b>CO4</b>	Define professional Ethical values and contemporary Issues
<b>CO5</b>	Relate in competitive and challenging environment to contribute to industrial growth.
<b>CO6</b>	Choose academic learning with experimental learning in a profession.





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<b>CS6004 CYBER FORENSICS</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Discuss the security issues network layer
<b>CO2</b>	Discuss the security issues in transport layer.
<b>CO3</b>	Apply security principles in the application layer.
<b>CO4</b>	Explain computer forensics.
<b>CO5</b>	Use forensics tools.
<b>CO6</b>	Analyze and validate forensics data.
<b>IT6011 KNOWLEDGE MANAGEMENT</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Usage about Introduction to Yoga and meditation
<b>CO2</b>	Apply ethics in society,
<b>CO3</b>	Discuss the ethical issues related to engineering and realize the responsibilities and rights in the society.
<b>CO4</b>	Analyze the Weapons Development – Engineers as Managers
<b>CO5</b>	Analyze the concept of Risk Benefit Analysis and Reducing Risk
<b>CO6</b>	Gain knowledge about Senses of 'Engineering Ethics'
<b>IT6811 PROJECT WORK</b>	
<b>Students will be able to</b>	
<b>CO1</b>	Identify technically and economically feasible problems of social relevance
<b>CO2</b>	Plan and build the project team with assigned responsibilities.
<b>CO3</b>	Identify and survey the relevant literature for getting exposed to related solutions
<b>CO4</b>	Analyze, design and develop adaptable and reusable solutions of minimal complexity by using modern tools
<b>CO5</b>	Implement and test solutions to trace against the user requirements
<b>CO6</b>	Deploy and support the solutions for better manageability of the solutions and provide scope for improvability