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II B.TECH- I SEM

A43012. COMPLEX ANALYSIS AND FOURIER TRANSFORM
Course Outcomes :

C201.1	Work with the functions of complex variables and evaluation of complex differentiation.
C201.2	Acquire the knowledge of complex power series and integration.
C201.3	Apply the knowledge of contour integration to evaluate real integrals in engineering problems and acquire the knowledge of evaluating of conformal mapping and bilinear transformations.
C201.4	Studying of Fourier series and defining it for various types of functions.
C201.5	Apply Fourier sine and cosine integral theorems for a given function f(x) evaluate Fourier transforms, sine and cosine transforms.

43508. OBJECT ORIENTED PROGRAMMING through JAVA
Course Outcomes:

C202.1	Able to solve real world problems using OOP techniques.
C202.2	Able to understand the use of abstract classes.
C202.3	Able to solve problems using inheritance, polymorphism.
C202.4	Able to develop multithreaded applications with synchronization.
C202.5	Able to handle run time errors while applying exception handling

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A43401. ELECTRONIC DEVICES AND CIRCUITS
Course Outcomes:

C203.1	Demonstrate the concepts of semiconductor theory.
C203.2	Interpret the characteristics of different semiconductor devices with its applications.
C203.3	Apply different biasing techniques of transistors for amplification.
C203.4	Analyze transistor amplifiers using small signal model.
C203.5	Ability to describe the behavior of special purpose diodes.

A43402. PROBABILITY THEORY AND STOCHASTIC PROCESSES
Course Outcomes:

C204.1	Demonstrate knowledge in Probability theory, Single and multiple random variables and Random processes and their characteristics
C204.2	Analyze operations on single and multiple random variables and processes.
C204.3	Compute Simple probabilities using an appropriate sample space, Expectations from probability density functions, Least-square & maximum likelihood estimators for engineering problems Mean and Covariance functions for simple random processes.
C204.4	Design solutions for complex engineering problems involving random processes.
C204.5	Understand how random variables and stochastic processes can be described and analyzed

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A43403. SIGNALS & SYSTEMS
Course Outcomes:

C205.1	Understand the Mathematics, operations and classification of signals and systems
C205.2	Apply the transform on standard and arbitrary signals
C205.3	Infer the signal transmission through linear systems
C205.4	Interpret the concepts of sampling and role of Z-Transform in analysis of systems.
C205.5	Understand the process of sampling and the effects of under sampling.

A43010. PROFESSIONAL COMMUNICATIONS
Course Outcomes

C206.1	Acquire enhanced personality
C206.2	Exhibit appropriate professional etiquette
C206.3	Practice team building with strong communication skills
C206.4	Develop problem solving skills and decision-making
C206.5	Demonstrate effective presentation skills

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A43481.ELECTRONIC DEVICES AND CIRCUITS LABORATORY
Course Outcomes

C207.1	Identify and use the basic components and instruments in electronics laboratory
C207.2	Outline the characteristics of different semiconductor devices.
C207.3	Interpret the ripple factor, regulations of rectifiers.
C207.4	Sketch the frequency response of small signal amplifiers.
C207.5	Understand the concepts of SCR & UJT and observe its characteristics.

A43482.BASIC SIMULATION LABORATORY
Course Outcomes

C208.1	Evaluate the operation on signals and systems using arithmetic operations andtransforms
C208.2	Application of correlation and transforms on noise removal and signal extraction
C208.3	Compute various statistical properties of a random noise and verify whether it isstationary
C208.4	Determine the correlation & Convolution between Signals and sequences.
C208.5	Validate the properties and waveform synthesis of various transforms

A43MC2.GENDER SENSITIZATION
Course Outcomes
At the end of the course the student should be able to

C209.1	To develop awareness about gender discrimination and take measurable steps tocounter it.
C209.2	To identify the basic dimensions of biological, sociological, psychological and legalaspects of gender.
C209.3	To acquire knowledge about gendered division of labour in relation to politics andeconomics.
C209.4	To prepare the students against gender violence.
C209.5	To prepare the students to work and live together as equals.

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II B.Tech II Semester

A44406.SWITCHING THEORY AND LOGIC DESIGN
Course Outcomes

C210.1	Demonstrate the basic theorems of Boolean algebra, logic gates, combinationaland sequential circuits and memories.
C210.2	Analyze the combinational and sequential circuits and memories.
C210.3	Design of logic circuits
C210.4	Realization of gates using different logic families.
C210.5	Explain the design and operation of different semiconductor memories

A44208.ELECTRICAL TECHNOLOGY
Course Outcomes

C211.1	Understand the concept of network topology
C211.2	Apply the concepts of the filters, attenuators to real-world problems.
C211.3	Able to synthesize the electrical networks using different techniques.
C211.4	Analyze the basic concepts of DC machines & AC Machines.
C211.5	Understand the basic concepts of some special machines

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A44407. NETWORK ANALYSIS AND TRANSMISSION LINES
Course Outcomes

C212.1	Recite basic concepts of network parameters, theorems and transmission line theory.
C212.2	Differentiate the changes of transient networks using Laplace transform
C212.3	Compare and contrast the parameters, functions and synthesis of the network
C212.4	Apply the concepts of theorems on networks and transmission line theory to solve impedance matching issues.
C212.5	Solve the transmission lines and matching circuits problems using Smith chart

A44408. ANALOG AND DIGITAL COMMUNICATIONS
Course Outcomes

C213.1	Demonstrate fundamental knowledge in Elements of Analog and Digital Communication systems.
C213.2	Analyze different types of analog and digital modulation systems and calculate total power & bandwidth.
C213.3	Design an efficient Transmitter and Receiver based on SNR, bandwidthand equipment complexities.
C213.4	Formulate and solve engineering problems in the core area of analog anddigital communications in developing information transmitting systems and telemetry system.
C213.5	Illustrate the impact of noise in analog communication systems and computation of Probability of error in digital modulation techniques

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A44409. ANALOG AND PULSE CIRCUITS

Course Outcomes

C214.1	Understand the concepts of amplifiers, feedback, large signal model and time basegenerators.
C214.2	Utilize the Concepts of feedback to improve the stability in amplifiers and oscillators.
C214.3	Analyze different multistage amplifiers, multivibrators and time base generators.
C214.4	List different classes of Power Amplifiers and tuned amplifiers useable for audio andRadio applications.
C214.5	Design RC and LC Oscillators for different frequencies and analyze them for frequencyand amplitude stability.

A44410. ELECTROMAGNETIC WAVES

COURSE OUTCOMES

C215.1	Understand the electric field due to different charge distributions.
C215.2	Demonstrate the EM Field Characteristics divergence and curl of fields.
C215.3	Interpret the Maxwell's equations for static Electric and Magnetic fields and dynamic Electromagnetic fields.
C215.4	Analyze the behavior of EM waves in different media.
C215.5	Solving Engineering problems on EM Wave Propagation.

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A44485. ANALOG AND DIGITAL COMMUNICATIONS LABORATORY
COURSE OUTCOMES

C216.1	Demonstrate knowledge in different Analog and Digital Communication Systems.
C216.2	Compare the characteristics of various Analog and Digital modulation schemesand analyze their performances.
C216.3	Develop various analog and digital modulation and demodulation systems
C216.4	Explain how Pulse code modulation is applied to transform an analog signal into adigital one and transmitted through the digital communication network.
C216.5	Design the shift keying based digital modulation techniques for the transmission ofdigital information

A44486. ANALOG AND PULSE CIRCUITS LABORATORY
COURSE OUTCOMES:-

C217.1	Compare the frequency response of tuned, MOS, Darlington amplifier.
C217.2	Sketch the sustained waveforms of oscillators, multi-vibrators and sweep circuits.
C217.3	Interpret the efficiency of power amplifiers.
C217.4	Explain the characteristics of Boot strap sweep circuit, Miller sweep circuit andUJT relaxation oscillator
C217.5	Design LC Oscillators for different frequencies and analyze them for frequency andamplitude stability.

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A44MC1. ENVIRONMENTAL SCIENCE
COURSE OUTCOMES

C218.1	Define and explain the structure and functions of ecosystem, value of biodiversity, threats and conservation of biodiversity.
C218.2	Explain the limitations of the resources and impacts of over utilization of all natural resources.
C218.3	Explain the sources and effects of environmental pollutions and list the available techniques to control the pollution.
C218.4	Explain the global environmental issues like climate change, ozone hole and can explain the scope of EIA, Environmental Management Plan, environmental audit andlist the EIA methods.
C218.5	Mention the salient features of environmental acts and rules, define the sustainable goals along with measures required for the sustainability.

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III B.Tech I Semester

A45219. CONTROL SYSTEMS
COURSE OUTCOMES

C301.1	Understand and analyzing different linear-time-invariant systems using transfer function.
C301.2	Analyze system response in time domain for first and second order systems and evaluate static error.
C301.3	Understand the concept of stability and its assessment for linear-time invariant systems.
C301.4	Analyze system response in frequency domain and understanding compensation networks.
C301.5	Realize the concept of state variable, state space and analyze the stability of linear Time discrete systems

A45412. MICROPROCESSORS AND MICROCONTROLLERS
COURSE OUTCOMES

C302.1	Acquire knowledge about Microprocessors, Microcontroller and its need.
C302.2	Ability to identify basic architecture of different Microprocessors & Microcontroller
C302.3	Develop systems for interfacing of different peripheral devices microprocessor &Microcontrollers
C302.4	Compose a program to interface microprocessor and microcontroller for differentapplications.
C302.5	Develop microcontroller application for different domain

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A45413. LINEAR & DIGITAL IC APPLICATIONS

COURSE OUTCOMES

C303.1	Demonstrate the functioning of OP-AMP, Special function and Digital ICs
C303.2	Analyze the operation, characteristics of OP-AMP, Special Function and Digital ICs
C303.3	Design a logic circuits using digital ICs
C303.4	Devising filters, multivibrators, waveform generators & arithmetic circuits using OP-AMP and Special Function ICs.
C303.5	Analyze and design applications like Counters FlipFlops Shift register using Digital integrated circuit.

A45414. ANTENNA AND PROPAGATION
COURSE OUTCOMES

C304.1	Understand different antennas, field analysis and their applications to antennaelements.
C304.2	Distinguish the mechanism of radiation, different antenna characteristics,mathematical relations their estimates in practical cases.
C304.3	Analyze and design the working of different antenna's and to interpret the radiationpattern of planar arrays from the knowledge of linear arrays.
C304.4	Obtain the capability to differentiate and report the electromagnetic radiation levels inthe Atmosphere and any radio transmissions.
C304.5	Design Microwave antenna Systems from specification

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A45415. COMPUTER ARCHITECTURE
(Professional Elective-I)
COURSE OUTCOMES

C305.1	Recall the structure and organization involved in computer design.
C305.2	Identify the different memory and input- output system involved in system design.
C305.3	Analyze computer parallelism and its design on program control and computerarithmetic operations.
C305.4	Comprehend the various details of multiprocessor and multi-core processors incomputer design
C305.5	Illustrate a better way the I/O and memory organization.

A45416.INFORMATION THEORY AND CODING
(Professional Elective-I)
COURSE OUTCOMES

C306.1	Understand the concept of information theory, coding techniques and errors relatedto it.
C306.2	Compare the different coding techniques.
C306.3	Formulate codes using different coding techniques
C306.4	Apply different coding techniques to develop an error free communication system.
C303.5	Inspect error detection and correction in various coding technique.

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A45417.INTRODUCTION TO MEMS
(Professional Elective-I)
COURSE OUTCOMES

C307.1	Understand the basic concepts involved in the design of MEMS devices.
C307.2	Interpret the different properties of MEMS materials
C307.3	Enumerate role of MEMS devices on sensing and Actuation through differentmediums.
C307.4	Contrast the types of MEMS devices on different materials through differentmediums.
C307.5	Apply the MEMS for different applications

A15419. INTRODUCTION TO MICROCONTROLLERS AND APPLICATIONS
(Open Elective–I)
COURSE OUTCOMES

C308.1	Interpret the internal organization of 8051 with its unique features.
C308.2	Infer and give examples about the various addressing modes, instruction formats and instructions of 8051.
C308.3	To understand the various interfacing techniques pertaining to system design.
C308.4	Construct the hardware and software interaction with each other using programming.
C308.5	Summarize the features of the advanced architecture using ARM controller.

SMART CITY (SC)
COURSE OUTCOMES

C308.1	Understand the necessity of smart infrastructure and to promote cities that provide quality of life to citizens.
C308.2	Explain technology-based solution on smart mobility.
C308.3	Illustrate & introduce the smart and sustainable waste and water management for smart cities.
C308.4	Evaluate economical models for smart infrastructure solution.
C308.5	Create healthy and waste ridden environment.

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ELEMENTS OF MECHANICAL ENGINEERING (EME)
COURSE OUTCOMES

C308.1	Understand the basic concepts of mechanical engineering.
C308.2	Apply principles of engineering mechanics in mechanism and machines
C308.3	Develop manufacturing methods to produce engineering components.
C308.4	Evaluate alternative designs for the engineering components
C308.5	Select a suitable type of automation applicable for any industry.

PRODUCT ENGINEERING (PE)
COURSE OUTCOMES

C308.1	Illustrate creativity and study the techniques of innovation
C308.2	Assess the evaluation techniques for screening ideas
C308.3	Differentiate the IPR-Patents, Design patents, copy right and trade mark and their laws.
C308.4	Describe the interaction between design, manufacture, quality and testing
C308.5	Establish the machining time in various cutting operations; value engineering; GT and concepts of concurrent engineering.

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JAVA PROGRAMMING (OPEN ELECTIVE)
COURSE OUTCOMES

C308.1	Apply OOP concepts in Java Programming
C308.2	Analyze the concepts of JAVA programming for problem solving
C308.3	Evaluate the concepts of packages and interfaces in java
C308.4	Analyze the usage of Exception Handling and Multithreading in complex Java programs
C308.5	Create GUI Applications and Applets

OPERATING SYSTEMS (OPEN ELECTIVE)
COURSE OUTCOMES

C308.1	Understand the functions of Operating Systems.
C308.2	Evaluate various process scheduling algorithms.
C308.3	Analyze various memory allocation techniques for effective utilization of memory.
C308.4	Evaluate various file concepts for effective storage.
C308.5	Analyze the concepts of deadlocks.

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TOTAL QUALITY MANAGEMENT (TQM)
COURSE OUTCOMES

C308.1	To explore the quality framework in production and operational aspects.
C308.2	To evaluate the role of quality in product design and analysis.
C308.3	To analyze quality in process improvement and modern production management tools.
C308.4	To understand the role of TQM tools and techniques in elimination of wastages and reduction of defects
C308.5	To analyze the requirements of quality management system.

REMOTE SENSING& GIS(RS&GIS)
COURSE OUTCOMES

C308.1	Select the type of remote sensing technique / data for required purpose.
C308.2	Identify the earth surface features from satellite images.
C308.3	Analyze the energy interactions in the atmosphere and earth surface features.
C308.4	Prepare thematic maps.
C308.5	Interpretations of satellite data for various applications.

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A15420. BASIC ELECTRONICS AND INSTRUMENTATION
(Open Elective-I)
COURSE OUTCOMES

C308.1	Summarize the concepts of different semiconductor devices with its characteristics.
C308.2	Describe the fundamental concepts and basic principle of meters.
C308.3	To classify the types of transducer with its methodology of data collection.
C308.4	Categorize different transducers and their working principles
C308.5	Explain different bridges and understand how different physical parameters can be acquired.

A45487.MICRO PROCESSORS AND MICRO CONTROLLERS LABORATORY
COURSE OUTCOMES

C309.1	Apply the fundamentals of assembly level programming of microprocessors andmicrocontrollers.
C309.2	Build a program on a microprocessor using instruction set of 8086 and 8051.
C309.3	Evaluate Assembly language program for 8086 and 8051 microcontroller tointerface peripheral devices for simple applications
C309.4	Develop assembly language programs for various applications using 8051microcontroller
C309.5	Understand the development of prototype using combination of hardware andsoftware

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A45488.LINEAR & DIGITAL IC APPLICATIONS LABORATORY
COURSE OUTCOMES

C310.1	Study the applications of IC's such as 741,555 and 723
C310.2	Design and construct the combinational and sequential circuits using digital IC's
C310.3	Understand and design the adder and subtractor digital circuits.
C310.4	Design and verify the Multiplexer
C310.5	Understand the basics of Op-Amp and to Design, Analyze Adder subtractor andcomparator

A45TP1.PERSONALITY DEVELOPMENT AND BEHAVIOURAL SKILLS
COURSE OUTCOMES

C311.1	Practice optimistic attitude for an efficient, socially viable and multi-facetedpersonality.
C311.2	Demonstrate functions of non-verbal communication in formal context.
C311.3	Build effective individual & team dynamics for professional accomplishments.
C311.4	Analyze appropriate strategic Interpersonal Skills for productive workplace relationships.
C311.5	Correspond in multiple contexts, for varied audiences, across genres and modalities.

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III YEAR II SEMESTER

A46023.MANAGERIAL ECONOMICS & AND FINANCIAL ANALYSIS
COURSE OUTCOMES

C312.1	Understand the nature and scope of business economics.
C312.2	Differentiate the various forms of Business organizations.
C312.3	Identify the impact of economic variables on the Business firms
C312.4	Analyze the Demand, Supply, Production, Cost, Market Structure, Pricing aspects
C312.5	Analyze, compare and interpret the Financial Statements of a Company using ratios.

A46420.DIGITAL SIGNAL PROCESSING
COURSE OUTCOMES

C313.1	Define the concepts of Fourier transforms, digital filters with their effect of errors.
C313.2	Illustrate speed and memory requirements of Fourier transforms on signals.
C313.3	Relate the effects of finite word length on systems.
C313.4	Formulate frequency filtering, impulse response filters with its structure.
C313.5	Ability to understand various applications of DSP such as multi rate signalprocessing, telecommunication

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A46421. MICROWAVE ENGINEERING
COURSE OUTCOMES

C314.1	Understands the application of 3-D coordinate geometry, calculus and vectorgeometry to analyze the EM wave transmission at microwave frequencies.
C314.2	Analyze the problem within the Microwave Transmission line by considering theparameters at transmitter and receiver.
C314.3	Design the microwave components and different transmission lines with the givencharacteristics at microwave frequencies.
C314.4	Apply the knowledge of microwave components and devices in RADARcommunication and satellite communication.
C314.5	Able to discriminate different Radars, find applications and use of its supportingsystems

A46422. DATA COMMUNICATION AND NETWORKS
COURSE OUTCOMES

C315.1	Demonstrate concepts of various types of computer networks, TCP/IP and OSImodels.
C315.2	Analyze different LLC multiplexing mechanisms, node-to-node flow and errorcontrol
C315.3	Analyze different MAC mechanisms (Aloha, Slotted Aloha, TDMA, FDMA) andunderstand their pros and cons.
C315.4	Identify and design the different types of network devices and shortest path in agiven network & Enable to interconnect various heterogeneous networks.
C315.5	Implement a peer to peer file sharing application utilizing application layerprotocols and transportation layer protocol.

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A46423.DIGITAL SIGNAL PROCESSORS AND ARCHITECTURES
(PROFESSIONAL ELECTIVE-2)

C316.1	Understand signal processing principles, interfacing strategies and the differentarchitectural features of DSP processors.
C316.2	Differentiate the architectural features of various DSP processors.
C316.3	Illustrate the methodology of writing programs for TMS32OC54xx.
C316.4	Explain the system development using DSP Processors for various applications.
C316.5	Able to introduce architectural features of analog devices family of DSP devices i.e.ADSP2100, ADSP 2181 and black fin processor

A46424.MODELING AND SIMULATION USING MATLAB
(PROFESSIONAL ELECTIVE-2)

C317.1	Develop codes on various domains of Electronics and Communication Engineering
C317.2	Handle the advanced commands in appropriate fields of engineering
C317.3	Visualize the impact of parameters during simulation
C317.4	Cater the industrial needs pertaining to the semiconductor technologies.
C317.5	Students will be able to implement simulation models using the tool Simulink

A46425.OPTICAL COMMUNICATIONS
(PROFESSIONAL ELECTIVE-2)
COURSE OUTCOMES:

C318.1	Gain Knowledge in optical communication, components, Mode theory, sources &detectors and Losses in optical fibers.
C318.2	Analyze single & multimode fibers and analog & digital links.
C318.3	Design and develop Optical sources, Detectors and links
C318.4	Develop Multi-Channel Optical Systems
C318.5	Discuss the elements of WDM networks and its potential applications.

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ENVIRONMENT POLLUTION & CONTROL METHODS (EPCM)
COURSE OUTCOMES

C319.1	Understanding about the various air pollutants and effect on environment.
C319.2	Analyze quality of air in the form of air quality index and dispersion modeling.
C319.3	Determine sampling and measurements of air Pollutants.
C319.4	Analysis and measurement of soil contamination.
C319.5	Predict types of noise and problems arise due to noise pollution.

GREEN BUILDING TECHNOLOGIES (GBT)
COURSE OUTCOMES

C319.1	Understand the Green building concept and focus on approaches that make building sustainable.
C319.2	Illustrate Green building assessment and accreditation system.
C319.3	Able to apply low energy building strategies.
C319.4	Designing green building and improve sustainability of infrastructure.
C319.5	Classify the economic benefits of green buildings.

PRINCIPLES OF OPERATIONS RESEARCH
COURSE OUTCOMES

C319.1	Model the real life situations with mathematical models. Understand the concept of linear programming.
C319.2	Solve transportation and assignment problems.
C319.3	Apply theory of games and queuing concepts for optimization.
C319.4	Formulate the sequencing of jobs on machines. Understand the various replacement concepts. Identify and apply various inventory models.
C319.5	Appraise dynamic programming models and simulation principles.

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MAINTENANCE AND SAFETY ENGINEERING
COURSE OUTCOMES

C319.1	Understand the need for maintenance in an industry and know about Maintenance Management and Control.
C319.2	Appreciate and implement various types of maintenance.
C319.3	Know the concept of inventory control in maintenance.
C319.4	Evaluate the quality and cost of safety and maintenance.
C319.5	Appraise the concepts of reliability and maintainability with reference to the maintenance of equipment.

BASIC AUTOMOBILE ENGINEERING (BAE)
COURSE OUTCOMES

C319.1	Understanding the basic structure of an automobile.
C319.2	Evaluating different cooling and lubrication systems of an automobile.
C319.3	Analyzing the electrical systems in tandem with ignition systems.
C319.4	Comparing the various transmission systems for their effectiveness.
C319.5	Understanding and there by implement the subsystems in the automobile for its low emission.

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MATERIAL SCIENCE ENGINEERING (MSE)
COURSE OUTCOMES

C319.1	Understanding the crystal structures and necessity of alloys.
C319.2	Classifying the ferrous materials and their heat treatment process.
C319.3	Evaluating the non ferrous materials and their applications in Engineering usage.
C319.4	Applying the composite materials as an efficient substitute.
C319.5	Implementing the principles of nano science and their by producing materials.

DATA BASE MANAGEMENT SYSTEMS
COURSE OUTCOMES

C319.1	Understand the Database Management systems concepts
C319.2	Analyze Entity-Relationship Model for enterprise level databases
C319.3	Develop a database and formulate the complex SQL queries
C319.4	Evaluate various Relational Formal Query Languages
C319.5	Analyze various Normal forms to carry out Schema refinement

SOFTWARE ENGINEERING (OPEN ELECTIVE)
COURSE OUTCOMES

C319.1	Understand various process models
C319.2	Apply requirement engineering process for a project.
C319.3	Analyze the design engineering and architectural design
C319.4	Evaluate various testing techniques
C319.5	Evaluate various metrics for process and products

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FINANCIAL INSTITUTIONS AND MARKETS (FIM)
COURSE OUTCOMES

C319.1	Understand object oriented software development process
C319.2	Gain exposure to object oriented methodologies & UML diagrams
C319.3	Use object oriented behavioral modeling analysis for project
C319.4	Apply object oriented Architectural modeling analysis for project
C319.5	Construct for developing structural design of a given project by using

A16428. FUNDAMENTALS OF EMBEDDED SYSTEMS
(OPEN ELECTIVE-II)

COURSE OUTCOMES

C319.1	Contrast the basics of embedded system with its application
C319.2	Illustrate the components required for embedded system design.
C319.3	Summarize the different development tool for embedded system
C319.4	Relate the concepts of RTOS in real time programming
C319.5	Outline the features of advanced buses for distributed data transfer in system design.

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A16429. PRINCIPLES OF COMMUNICATIONS
(Open Elective-II)
COURSE OUTCOMES

C319.1	Understanding the fundamentals of communications
C319.2	Summarize the different modulation techniques involved in analog and digital Communication.
C319.3	Identify the applications of various wired and wireless communications in real time.
C319.4	Elaborate the fundamentals of satellite and optical communications.
C319.5	Understand various Networking Concepts.

A46489.DIGITAL SIGNAL PROCESSING LABORATORY
COURSE OUTCOMES:

C320.1	Formulate programs for performing time & frequency operation on signals andsystems.
C320.2	Design and implement impulse response filters and Multirate system for a givensequence
C320.3	Analyze and Observe Magnitude and phase characteristics (Frequency responseCharacteristics) of digital IIR-Butterworth, Chebyshev filters
C320.4	Analyze and Observe Magnitude and phase characteristics (Frequency responseCharacteristics) of digital FIR filters using window techniques
C320.5	Develop various DSP Algorithms using MATLAB Software package

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A46088.ADVANCED COMMUNICATION SKILLS LAB
COURSE OUTCOMES

C321.1	Develop sound communication skills in various situations with the help of enrichedvocabulary.
C321.2	Practice reading techniques for a faster and better comprehension.
C321.3	Exhibit strong writing skills to express ideas effectively.
C321.4	Demonstrate effective presentation skills.
C321.5	Use appropriate verbal and non-verbal skills for a successful career

A46TP1.QUANTITATIVE METHODS & LOGICAL REASONING
COURSE OUTCOMES:

C322.1	To perform well in various competitive exams and placement drives.
C322.2	To solve basic and complex mathematical problems in short time.
C322.3	To become strong in Quantitative Aptitude and Reasoning which can be applied forGRE, GATE, GMAT or CAT exam also.
C322.4	To develop problem solving skills and analytical abilities, which play a great role incorporate and industry set up.
C322.5	To perform well in various competitive exams and placement drives.

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IV YEAR I SEMESTER

A47428. EMBEDDED SYSTEM DESIGN
COURSE OUTCOMES:

C404.1	Expected to understand the selection procedure of Processors in the embeddeddomain.
C404.2	Design Procedure for Embedded Firmware.
C404.3	Expected to visualize the role of Real time Operating Systems in EmbeddedSystems
C404.4	Expected to evaluate the Correlation between task synchronization and latencyissues
C404.5	To Enumerate the need for Task Communications in a Multiprocessor Environment

A47429. VLSI DEISGN
COURSE OUTCOMES

C402.1	Enumerate different steps involved in Integrated Circuits technology for MOS transistor and explain the primary and secondary effects of MOSFET and BICMOS.
C402.2	Summarize the fabrication process involved in VLSI circuits
C402.3	Outline the design process involved in VLSI design flow for design of MOStransistors.
C402.4	Understand and apply the concepts of memories in design.
C402.5	Design digital circuits using Verilog HDL.

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A47430. DIGITAL IMAGE PROCESSING
(Professional Elective-3)

COURSE OUTCOMES:

C403.1	State the Digital Image Fundamentals and operation associated with various stagesof image processing.
C403.2	Illustrate the mathematics involved in various stages of image processing.
C403.3	Demonstrate the operations various stages of image processing.
C403.4	Contrast the different types of operation and its impact on images.
C403.5	Understand the anatomy of image compression in Image Transmission

A47431.CELLULAR AND MOBILE COMMUNICATIONS
(Professional Elective-3)

COURSE OUTCOMES :

C404.1	Understand the principles of mobile communications, radio models, Antennas forMobile communication, Equalization and applications.
C404.2	Interpret the propagation models of Mobile and its effect on Antenna, Diversity andapplications.
C404.3	Relate the concepts of propagation models with channel interference
C404.4	Explain the propagation models, channel interference, antenna design for the recentmobile systems
C404.5	Recite the Handoff and Dropped calls in Cellular mobile communications

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A47432.RADAR ENGINEERING
(Professional Elective-3)
COURSE OUTCOMES:

C405.1	Understand the concepts of radar fundamentals, noise analysis and evaluation ofradar.
C405.2	Differentiate various types of radar transmitters and receivers.
C405.3	Relate the different types of radar transmitter and receiver.
C405.4	Categorize the type of radar system and noise analysis based on applications.
C405.5	Correlate the different methods of Radar Reception and Receivers

A47433.BIOMEDICAL INSTRUMENTATION
(Professional Elective-4)
COURSE OUTCOMES:

C406.1	Summarize the requirement of biomedical instrumentation and adversity involved inhuman measurement.
C406.2	Understand the concept of Bio Potentials in a Human Body
C406.3	Utilize the concept of electrode and its responses used in real time.
C406.4	Outline the divergent responses involved in cardiovascular and respiratory system.
C406.5	Compare the various processes involved in bio telemetry.

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A47434.SATELLITE COMMUNICATIONS
(Professional Elective-4)
COURSE OUTCOMES:

C407.1	Demonstrate the historical background, basic concepts and frequency allocations forsatellite communications.
C407.2	Compare and contrast between various multiple access systems for satellitecommunication system.
C407.3	Understand the propagation effects of signal in Satellite transmission
C407.4	Design of satellite links for specified CNR.
C407.5	Visualize satellite subsystems like telemetry, tracking, command and monitor powersystems etc.

A47435.TELECOMMUNICATION SWITCHING SYSTEMS AND NETWORKS
(Professional Elective-4)
COURSE OUTCOMES:

C408.1	Understand different switching system methodologies, network traffic, networks andits applications.
C408.2	Explain different signaling methods used in Telecommunication Networks.
C408.3	Enumerate traffic in telecommunications network
C408.4	Relate different data communication networks.
C408.5	Demonstrate the applications of modern telecommunication concepts.

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A47490. EMBEDDED& VLSI LABORATORY
COURSE OUTCOMES:

C409.1	Code the ARM cortex M0+ processor instruction set.
C409.2	Articulate the concept of interfacing I/O devices with FRDM kit.
C409.3	Synthesize a Verilog code for digital circuits
C409.4	Devise the digital circuit in CPLD/FPGA
C409.5	Formulate a system design using Embedded and VLSI technologies

A47491.ANTENNA AND MICROWAVE ENGINEERING LABORATORY
COURSE OUTCOMES:

C410.1	Contrast the different ways of measuring antenna parameters.
C410.2	Differentiate the different Radiation pattern of the antennas
C410.3	Study the characteristics of various microwave components
C410.4	Articulate the performance of Microwave components
C410.5	Formulate a antenna design using Antenna and Microwave technologies

MAINTENANCE AND SAFETY ENGINEERING (MSE)
COURSE OUTCOMES

C411.1	Understanding the need for maintenance of a machine in an industry.
C411.2	Identifying various maintenance policies.
C411.3	Analyzing the cost and time concepts while implementing the maintenance.
C411.4	Evaluating the quality concepts for safety and maintenance of an equipment
C411.5	Appreciating the terms reliability and maintainability with reference the maintenance of an equipment.

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INFORMATION SYSTEMS FOR ENGINEERS (ISE)(Open Elective)
COURSE OUTCOMES:

C411.1	Understand the concepts of Information Systems.
C411.2	Evaluate the design, development and security of Information Systems
C411.3	Analyze the various modules in social issues while using Information Systems.
C411.4	Analyze the issues in data security
C411.5	Analyse the concept of ethics in information systems.

WEB DESIGN (OPEN ELECTIVE)
COURSE OUTCOMES:

C411.1	Create static web pages using HTML
C411.2	Design styles for HTML web pages
C411.3	Create interactive web pages using Javascript
C411.4	Develop web applications using server side scripting language-PHP
C411.5	Develop and analyze web applications with Java Server Pages

BASIC AUTOMOBILE ENGINEERING (OPEN ELECTIVE)
COURSE OUTCOMES:

C411.1	Understanding the basic structure of an automobile.
C411.2	Evaluating different cooling and lubrication systems of an automobile
C411.3	Analyzing the electrical systems in tandem with ignition systems
C411.4	Understand various transmission and suspension systems.
C411.5	Appraise steering and braking systems. Understand emission norms of automobiles.

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MATERIAL SCIENCE & ENGINEERING (OPEN ELECTIVE)

COURSE OUTCOMES:

C411.1	Understand structure of metals and constitution of alloys.
C411.2	Appraise equilibrium diagrams of various alloys.
C411.3	Classify steels, cast irons and their alloys.
C411.4	Appreciate different heat treatment processes and their influence on
C411.5	properties of metals and alloys. Know different Non-ferrous Metals and

A47MP1.INDUSTRY ORIENTED MINI PROJECT

COURSE OUTCOMES:

C412.1	Understand the working environment of an Industry
C412.2	Create an avenue in the industry in terms of a mini project
C412.3	Predict a timeline for the project
C412.4	Evaluate the requirements of the projects in terms of different subsystems
C412.5	Create a dissemination report for the mini project

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IV B.TECH-II SEM

A48438. ELECTRONIC MEASUREMENTS AND INSTRUMENTATION
COURSE OUTCOMES

C413.1	Acquire knowledge in Characteristics of Instruments, measurement on non-electricalquantities
C413.2	Analyze the performance of various measuring systems based on the response tothe given inputs.
C413.3	Design electronic instrumentation systems according the required specifications
413.4	Apply different principles to measure a quantity and to provide wide range ofsolutions for the problems in real time world
C413.5	Recite the acquisition of Non Electrical quantities in a system

A48439. WIRELESS COMMUNICATIONS AND NETWORKS
COURSE OUTCOMES

C414.1	Infer the basic concepts of different Access techniques, data service, technology andstandards associated with wireless communication networks
C414.2	Distinguish the multiple access techniques, standards, Technology used in wirelessCommunication and networks
C414.3	Interpret the recent wireless standards on communications and networks.
C414.4	Appraise the various wireless networks in communication systems.
C414.5	Distinguish the different wireless networks

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A484TS. TECHNICAL SEMINAR
COURSE OUTCOMES:

C415.1	Synthesizing information on any one specialized topic from text books, peer revisedjournals, hand books and other technical resources.
C415.2	Accumulate information regarding the topic
C415.3	Create a presentation to disseminate the accumulated data as presentation
C415.4	Generation a technical seminar report comprising of all relevant information withstipulated standards.
C415.5	Evaluate the intensity of topic in real time

A484CV. COMPREHENSIVE VIVA VOCE
COURSE OUTCOMES:

C416.1	Remember the basics of Electronics and communication Engineering
C416.2	Understand the different methods of analyzing the circuits
C416.3	Recite the importance of Electronics and communication in terms of application
C416.4	Recap the knowledge of the subjects through modern applications
C416.5	Comprehensive understanding of the subject

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A48MP2. MAJOR PROJECT
<u>**COURSE OUTCOMES**</u>:

C417.1	Understand the basics of project management
C417.2	Identify an area of project work through extensive literature survey
C417.3	Formulation of Ideas from the survey
C417.4	Presentation of ideas in terms of presentation
C417.5	Create a dissemination report for the project done

In- Charge   **HoD**