I Year I Semester   A Y:2017-2018

CO No.	Subject: English-I	Taxonomy Level
After completing the course the student shall be able to		
C111.1	Students enhanced communication skills and team work	Applying
C111.2	students can understand the structure of a paragraph	Understanding
C11T.3	students will improve self motivation and self esteem	Creating
C111.4	students can apply problem solving adaptability and stress management in their lives	Applying
C111.5	students will learn personal presentation	Analyzing
C111.6	students will develop conversation proficiency	Applying

CO No.	Subject: Mathematics-I	Taxonomy Level
After completing the course the student shall be able to		
C112.1	Find the solutions of first order ordinary differential uations.	Understanding
C112.2	Apply the technique of solving ordinary differentialequations in some engineering problems like electrical circuits, simple harmonic motions etc.	Applying
C112.3	Define Laplace transform and inverse Laplace transform of various functions and solve ordinary differential equations using Laplace transform.	Applying
C112.4	Utilize the technique of partial differentiation to find the extreme values of functions of several variables.	Applying
C112.5	Find the solutions of linear and nonlinear partial differential equations of first order.	Understanding
C112.6	Solve the higher order linear partial differential equations.	Understanding

CO No.	Subject: Mathematics-II	Taxonomy Level
After completing the course the student shall be able to		
C113.1	Understand the most basic numerical method to solve simultaneous linear equations.	Understanding
C113.2	Define interpolation and compute interpolating polynomial from the given data using interpolating formula.	Remembering
C113.3	Solve differential equations numerically using numerical methods.	Applying
C113.4	Understand the basic concepts of complex function and analytic functions using C-R equations.	Remembering
C113.5	Make use of Cauchy's theorem and Cauchy's Integral theorem to evaluate complex integration.	Applying
C113.6	Make use of residues to evaluate complex integration.	Applying

CO No.	Subject: Applied Physics	Taxonomy Level
After completing the course the student shall be able to		
C114.1	Explain the properties of light supporting the wave nature and working of optical instruments	Understanding

C114.2	Apply Lasers in scientific research and engineering by developing knowledge on basic principle in the working of Lasers & optical fibers.	Applying
C114.3	Describe the concept of Electrical or Electronic gadgets and their performance under E- or H- fields.	Understanding
C114.4	Explain the concept of Acoustics of Buildings, and the behavior of materials in the external magnetic and electric fields and physical significance of Maxwell's equations.	Understanding
C114.5	Explain the concept of matter waves, free electron theory and origin of energy band formation in solids .	Understanding
C114.6	Explain the intrinsic and extrinsic semiconductors ,drift ,diffusion currents in semiconductors.	Understanding

CO No.	Subject: Computer Programming	Taxonomy Level
After completing the course the student shall be able to		
C115.1	Explain the basic terminology used in computer programming	Understanding
C115.2	Discuss the design of Algorithms, writing and executing programs	Understanding
C115.3	Explain the different data types, selection and Basic loop structures	Understanding
C115.4	Apply the modular programming and recursive solution formulations.	Applying
C115.5	Demonstrate the data representations using arrays.	Applying
C115.6	Implement data structures, dynamic memory, create, update data files	Applying

CO No.	Subject: Engineering Drawing	Taxonomy Level
After completing the course the student shall be able to		
C116.1	Learn the usage of drawing instruments and how to draw Polygons, Engineering Curves and Scales	Remembering
C116.2	Explain about the Orthographic Projections, Projection of Points And Lines	Understanding
C116.3	Solve and draw the projections of straight lines inclined to both the planes	Applying
C116.4	Solve and draw the projection of planes	Applying
C116.5	Solve and draw the projection of solids	Applying
C116.6	Draw the Isometric Views to Orthographic Views and vice versa .	Applying

CO No.	Subject: English-Communications Skills Lab-I	Taxonomy Level
After completing the course the student shall be able to		
C117.1	Explain the basic concepts of language useful for pupils in their career	Applying
C117.2	Illustrate the usage of tenses in everyday life.	Understanding
C117.3	Apply the techniques of science through language ability in a practical way.	Applying
C117.4	Make use of grammatical sentences for perfect communication	Creating
C117.5	Analyze the importance of future tense with examples	Analyzing
C117.6	Find the speaking and writing skills through reading ability of safety measures	Applying

CO No.	Subject: Applied Physics Lab	Taxonomy Level
After completing the course the student shall be able to		
C118.1	Explain the appropriate application of Optics in Newton rings	Understanding
C118.2	Explain the appropriate application of Optics in Diffraction Grating	Understanding
C118.3	Apply the basic concepts of laser and techniques for the optics experiments.	Applying
C118.4	Apply the mathematical concepts/equations to obtain quantitative results.	Applying
C118.5	Explain the basic concepts of semiconductor physics, which are useful to understand the operation of Zener diode and PN junction diode	Understanding
C118.6	Develop basic communication skills through working in groups in performing the laboratory experiments and by interpreting	Evaluating

CO No.	Subject: Engineering Workshop & IT Workshop	Taxonomy Level
After completing the course the student shall be able to		
C119.1	Identify the different tools and prepare prototypes in the trades of Carpentry and Tinsmithy such as Cross half lap joint, Dove tail joint, rectangular Tray and Open scoop	Applying
C119.2	Identify the different tools and prepare prototypes in the trades of Fitting and Black smithy	Applying
C119.3	Apply the various House Wiring techniques such as connecting one lamp with one switch, connecting one lamp with two switches, connecting a fluorescent tube	Applying
C119.4	Apply the knowledge for computer assembling, software installation and trouble shoot and up gradation of system	Applying
C119.5	Learn MS-office package, internet tools and Apply the tools for preparation of PPT, Documentation and spread sheet etc	Applying

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(Approved by AICTE-NEW DELHI, Affiliated to JNTUK KAKINADA)

NH-16, Valluru,-523272, Ongole, Prakasam District, A.P

DEPARTMENT OF ECE
COURSE OUTCOMES

I Year II Semester   A Y:2017-2018

CO No.	Subject: English-II	Taxonomy Level
After completing the course the student shall be able to		
C121.1	Acquire the knowledge of education and how to serve the society accordingly	Remembering
C121.2	Classify the different perspective of science in the sense of a common man and scientist	Understanding
C121.3	Apply the knowledge to adjust ourselves towards the environmental conditions in the society	Applying
C121.4	Create an awareness on the present day and traditional beliefs	Applying
C121.5	Create the awareness on health threats due to climate changes.	Applying
C121.6	Identify the greatness and the hard work of the pioneers and try to inspire in attainting language communication skills	Remembering

CO No.	Subject: Mathematics-III	Taxonomy Level
After completing the course the student shall be able to		
C122.1	Applying analytical and numerical techniques to solve linear system of equations using matrices.	Applying
C122.2	Find the Eigen values and Eigen vectors of the square matrices and discuss the nature of quadratic forms.	Remembering
C122.3	Applying the techniques of multiple integrals to find the areas and volumes.	Applying
C122.4	Find the values of definite integrals using Beta and Gamma functions.	Remembering
C122.5	Find the gradient of scalar point functions, divergence and curl of vector point functions.	Remembering
C122.6	Applying Green's, Stokes and Gauss's divergence theorems to find line, surface and volume integrals.	Applying

CO No.	Subject: Applied Chemistry	Taxonomy Level
After completing the course the student shall be able to		
C123.1	Differentiate the plastics and rubber materials and their uses.	Analysing
C123.2	Explain the origin of fuel and their economic advantages and limitations.	Understanding
C123.3	Explain the working of batteries and its applications.	Understanding
C123.4	Describe the synthesis of nano materials and green methods.	Understanding
C123.5	Classify the types of solids and magnetic materials	Understanding
C123.6	Discuss the non conventional energy resources and fuel cells	Understanding

CO No.	Subject: Electrical & Mechanical Technology	Taxonomy Level
After completing the course the student shall be able to		
C124.1	Explain the principles of electrical law's, principles of operation details of DC machine and transformers	Understanding
C124.2	Analyze the principle and operation of alternator&3-phase Induction motor	Analyzing
C124.3	Explain the principle & construction of various measuring instruments	Understanding
C124.4	Identify renewable energy sources and their utilization & demonstrate the ability to perform a thermodynamic analysis of Otto, Diesel, and Dual cycle models.	Applying
C124.5	Understand how heat and energy is transferred between the elements of a system for different configurations.	Understanding
C124.6	Understand mechanism of power transfer through belt, rope, chain and gear drives & also functions and operations of machine tools	Understanding

CO No.	Subject: Data Structures	Taxonomy Level
After completing the course the student shall be able to		
C125.1	Find solutions to different problems using arrays.	Understanding
C125.2	Find solutions to different problems using stack and queue	Understanding
C125.3	Perform different operations for storage and retrieval of data on linked lists.	Applying
C125.4	Handle various operations like searching, insertion, deletion, Traversing mechanism etc. on various Trees data structures	Applying
C125.5	Handle various operations like searching, Traversing mechanism etc. on various Graph data structure	Applying
C125.6	Explain concepts of sorting techniques	Understanding

CO No.	Subject: Environmental Studies	Taxonomy Level
After completing the course the student shall be able to		
C126.1	Explain the concepts of the ecosystem and its functions in the environment.	Understanding
C126.2	Summarize the natural resources and their importance for the sustenance of life & need to conserve the natural resources	Understanding
C126.3	Demonstrate the values, threats, conservation practices to protect the biodiversity.	Applying
C126.4	Describe various attributes of the pollution and their impacts and measures to reduce pollution along with waste management practices.	Understanding
C126.5	Evaluate social issues both rural and urban environment and the possible means to combat the challenges, with help of environmental legislations of India	Evaluating
C126.6	Implement Environmental Impact Assessment, Green campus, business, & politics in their daily life	Applying

CO No.	Subject: English Communication Skills Lab-II	Taxonomy Level
After completing the course the student shall be able to		
C127.1	Explain the importance of body language.	Understanding
C 127.2	Summarize the skill of general English through dialogue.	Understanding
C 127.3	Develop short presentations on simple topics.	Applying
C 127.4	Summarize training offered to students through Group Discussion.	Analyzing
C 127.5	Describe the stand of interview skills through that students will successes.	Remembering
C 127.6	Explain the knowledge ability to communicate the needs and requirements of Debate.	Understanding

CO No.	Subject: Engineering Chemistry Laboratory	Taxonomy Level
After completing the course the student shall be able to		
C128.1	Describe the experimental skills to design new experiments in engineering.	Understanding
C 128.2	Explain tge different types of titrations and acquire skills in instrumentation.	Understanding
C 128.3	Determine hardness of various water samples.	Evaluating
C 128.4	Determine tge no of free ions and charges in a mixture of acids using conductivity meter .	Evaluating
C 128.5	Calculate the potential between reference electrode and un known solution by using potentio meter.	Understanding

CO No.	Subject: Computer Programming Lab	Taxonomy Level
After completing the course the student shall be able to		
C129.1	Explain the basic terminology of C programming development environment	Understanding
C129.2	Discuss the design of Algorithms, writing, compiling, debugging and executing Programs.	Understanding
C129.3	Analyzing the complexity of problems and modular programming	Analyzing
C129.4	Understand and apply the in-built and user defined functions for solving problems.	Applying
C129.5	Understand and apply the pointers and memory allocations techniques for solving Problems.	Applying
C129.6	Implement different data structures, and create, update data files	Applying

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RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINNERING

AY: 2017-18   SEM:1   YEAR: II

COURSE OUTCOMES

CO No	Subject: Electronic Devices and Circuits	Taxonomy
Student should be able to		
C211.1	Explain the basic concepts of semiconductor physics.	Understanding
C211.2	Explain the formation of p-n junction and how it can be used as a p-n	Understanding
C211.3	Describe the construction, working principle of rectifiers with and without	Applying
C211.4	Explain the construction, principle of operation of transistors, BJT and	Understanding
C211.5	Make use of transistor biasing, various biasing techniques for BJT and FET	Applying
C211.6	Perform the analysis of small signal low frequency transistor amplifier	Analyzing

CO No	Subject: Switching Theory &Logic Design	Taxonomy
Student should be able to		
C212.1	Explain the basics of different number systems, logic operations and codes	Understanding
C212.2	Simplify the Boolean functions using Minimization techniques	Analyzing
C212.3	Design different combinational circuits	Evaluating
C212.4	Develop a PLD for the given Boolean functions	Applying
C212.5	Design different sequential circuits	Evaluating
C212.6	Design FSM's by using sequential circuits	Analyzing

CO No	Subject: Signals &Systems	Taxonomy
Student should be able to		
C213.1	Characterize the signals and systems and principles of vector spaces, Concept of	Understanding
C213.2	Analyze the continuous-time signals and continuous-time systems using Fourier	Analyzing
C213.3	Apply sampling theorem to convert continuous-time signals to discrete-time signal	Applying
C213.4	Undestand the relationships among the various representations of LTI systems	Understanding
C213.5	Understand the Concepts of convolution, correlation, Energy and Power density and	Understanding
C213.6	Apply z-transform to analyze discrete-time signals and systems.	Applying

CO No	Subject: Network Analysis	Taxonomy
Student should be able to		
C214.1	Student able to explain the basic network elements and analyze the performance of periodic waveforms	Analyzing
C214.2	Student Will analyze the RLC circuits behavior in detailed	Analyzing
C214.3	Student able to analyze the coupled circuit and resonance	Analyzing
C214.4	Student will apply theorems for electrical circuits both ac and dc	Applying
C214.5	Student Gain the knowledge in characteristics of two port network parameters	Evaluating
C214.6	Student will analyze the filter design concepts in real world applications.	Analyzing

CO No	Subject: Random variables & Stochastic Process	Taxonomy
Student should be able to		
C215.1	Determine the random variables and solve simple probabilistic problems	Understanding
C215.2	Illustrates the different types of moments and transformations of random variables	Understanding
C215.3	Applying distributions, density and moments theory for multiple random variables	Applying
C215.4	Determine and explain the random process and stationary levels	Understanding
C215.5	Evaluating the different types of correlations and their spectral and temporal	Evaluating
C215.6	Analyze the LTI systems with random inputs and analyze these systems in the	Analyzing

CO No	Subject: Managerial Economics & Financial Analysis	Taxonomy
Student should be able to		
C216.1	Determine the objectives, nature, scope, role & responsibilities of a manager	Understanding
C216.2	Predict the demand for a product or product mix of a company, Examine optimum	Understanding
C216.3	Recognize Types of Business Organization and Business Cycles	Understanding
C216.4	Explore the knowledge in competitive markets, pricing strategies, forms of business	Applying
C216.5	Prepare the accounting concepts like Journal, Ledger, Trial Balance, financial	Applying
C216.6	Explain the significance of capital in business and knowing the steps, methods,	Understanding

CO No	Subject: EDC Lab	Taxonomy
Student should be able to		
C217.1	Identifying of electronic components and electronic equipment	Remember
C217.2	Analyzing characterstics of different diodes and transistors	Understanding
C217.3	Describe application of diode	Applying
C217.4	Analyze the different transmitters and receivers techniques	Understanding
C217.5	Understanding the use of RPS and CRT	Understanding
C217.6	Analyzing experimental data and preparing a lab record	Applying

CO No	Subject: N&ET Lab	Taxonomy
Student should be able to		
C218.1	Analyze RLC Circuits And Understand Resonant Frequency And Q-Factor.	Analyzing
C218.2	Determine the Z,Y-parameters	Evaluating
C218.3	Apply network theorems to analyze the electrical network.	Applying
C218.4	Determine the performance of dc shunt machine.	Evaluating
C218.5	Determine the performance of 1-phase transformer.	Evaluating
C218.6	Perform tests on 3-phase induction motor and alternator to determine their	Evaluating

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RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONSDEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINNERING

COURSE OUTCOMES

CO No	Subject: Electronic Circuit Analysis	Taxonomy level
Student should be able to		
C221.1	Design small signal high frequency amplifier circuits by using BJT and FET.	Analyzing
C221.2	Design of multi stage amplifiers using BJT & FET.	Analyzing
C221.3	Apply the concept of feedback to various types of amplifier circuits.	Applying
C221.4	Apply the principle of oscillations to different types of oscillator circuits.	Applying
C221.5	Analyze different power amplifiers based on their performance.	Analyzing
C221.6	Analyze different tuned amplifiers based on their performance.	Analyzing

CO No	Subject: Control Systems	Taxonomy level
Student should be able to		
C222.1	Describe concepts of feedback and its advantages to various control systems	Understanding
C222.2	Determine the transfer function for a given system using block diagram and signal flow	Evaluating
C222.3	Analyze the transient and steady state response of control systems.	Analyzing
C222.4	Calculate the stability of a system.	Applying
C222.5	Design compensation networks	Designing
C222.6	Analyze of State variables and state models	Analyzing

CO No	Subject: Electromagnetic Waves and Transmission Lines Transmission Lines	Taxonomy level
Student should be able to		
C223.1	Determine Electric & magnetic field intensity using various laws and identify the applications of electro magneto static fields	Creating
C223.2	Apply the Maxwell equations to analyze the time varying behavior of EM waves	Evaluating
C223.3	Analyze the wave propagation in various media and determine the characteristics of the uniform plane wave	Analyzing
C223.4	Analyze reflection and refraction of plane waves in conductor's and dielectrics	Applying
C223.5	Determine the primary and secondary constants of transmission lines under different	Remembering
C223.6	Determine reflection coefficient, VSWR of transmission line. theoretically & using smith chart	Understanding

CO No	Subject: Analog Communications	Taxonomy level
Student should be able to		
C2241	Understand the fundamentals of analog communication systems..	Understanding
C2242	Demonstrate various amplitude modulation and demodulation schemes and compare their spectral characteristics	Understanding
C2243	Understand the power and bandwidth requirements of FM and compare with AM	Understanding
C2244	Analyze various functional blocks of transmitters and receivers	Analyzing
C2245	Analyze noise characteristics of various analog modulation schemes	Analyzing
C2246	Understand the various pulse analog modulation schemes and demonstrate FDM & TDM techniques.	Understanding

CO No	Subject: Pulse and Digital Circuits	Taxonomy level
Student should be able to		
C225.1	Design linear wave shaping circuits.	Creating
C225.2	Design non-linear wave shaping circuits.	Creating
C225.3	Apply the fundamental concepts of wave shaping for various switching, Analysis of Bi-stable Multivibrator.	Applying
C225.4	Analysis of Mono stable multi vibrator and Astable Multivibrator.	Analyzing
C225.5	Analysis of different Time base Generators	Analyzing
C225.6	Understand the concept of Logic gates & Sampling gates	Understanding

CO No	Subject: Management Science	Taxonomy level
Student should be able to		
C226.1	To know the management science in decision making process& its importance, evaluation of management thought, how organisation structure is designed and its principle and types.	Remembering
C226.2	To Implement quality of working methods , management about work study, how quality is controlled, control charts and inventory control and their types	Applying
C226.3	To understand the main functional areas of organisation i.e., Financial Management, Production Management, Marketing Management, Human resource Management, Product life cycles and Channels of Distribution	Understanding
C226.4	The learning objective of this unit is to understand the Development of Network And Identifying Critical Path	Understanding
C226.5	To Appling concept of strategic management, environmental scanning, swot analysis and steps in strategy formulation and implementation.	Applying
C226.6	To understand basic concepts of MIS, MRP, JIT, TQM, Six sigma, CMM, Supply chain management, ERP, BPO , about performance management, bench marking and balance score card and business process re-engineering .	Understanding

CO No	Subject: ECA Lab	Taxonomy level
Student should be able to		
C227.1	Design small signal single stage amplifiers and then observe it's frequency	Analyzing
C227.2	Design multi stage amplifiers and then observe it's frequency response.	Analyzing
C227.3	Design feedback amplifiers and then observe it's frequency response.	Analyzing
C227.4	Design an oscillator circuit and calculate it's output frequency.	Analyzing
C227.5	Design power amplifiers and then observe it's frequency response.	Analyzing
C227.6	Design tuned amplifiers and then observe it's frequency response.	Analyzing

CO No	Subject: Analog Communications Lab	Taxonomy level
Student should be able to		
C228.1	Analyze the modulation and demodulation techniques of conventional AM	Analyzing
C228.2	Analyze the modulation and demodulation techniques of conventional	Analyzing
C228.3	Analyze the modulation and demodulation techniques of conventional	Analyzing
C228.4	Analyze the different transmitters &receivers techniques.	Analyzing
C228.5	Analyze the circuit diagrams of PLL&AGC.	Analyzing
C228.6	Analyze the different digital modulation and de-modulation techniques.	Analyzing

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINNERING

AY: 2017-18   SEM:1   YEAR: III

CO No	Subject: Pulse and Digital Circuits	Taxonomy
Student should be able to		
C311.1	Design linear wave shaping circuits	Analyzing
C311.2	Design non-linear wave shaping circuits	Analyzing
C311.3	Classification of switching circuits and logic families	understandin
C311.4	Analysis of different multivibrators	applying
C311.5	Analysis of different synchronization frequency division circuits and sampling	applying
C311.6	Analysis of different time base generators	applying

CO No	Subject: Linear I C Applications	Taxonomy
Student should be able to		
C312.1	Analyze the characteristics of differential amplifiers.	Analyzing
C312.2	Analyze the DC & AC characteristics of Operational amplifier.	Analyzing
C312.3	Design linear and nonlinear applications of op – amps.	Creating
C312.4	Design active filters using op-amps.	Creating
C312.5	Implement the applications of special ICs like Timer and PLL.	Applying
C312.6	Analyze the conversion techniques of DAC and ADC using Op – amps.	Analyzing

CO No	Subject: Control Systems	Taxonomy level
Student should be able to		
C313.1	Derive the mathematical model for a given system and find the transfer	Analyzing
C313.2	Determine the transfer function for a given using block diagram and signal	Evaluating
C313.3	Derive the transient and steady state response of control systems.	Analyzing
C313.4	Calculate the stability of a system.	Evaluating
C313.5	Understand the basics of stability analysis of the system	Understanding
C313.6	Design compensation network.	Applying

CO No	Subject: DSD &Digital IC Applications	TAXONOMY
Student should be able to		
C314.1	Develop digital logic with VHDL, simulation and synthesis.	Applying
C314.2	Analyze abstraction levels of digital design for modeling of Digital circuits.	Analyzing
C314.3	Develop the functionality using Programmable Logic devices and memory	Applying
C314.4	Understand the concept of logic families used in Integrated Circuits.	Understanding
C314.5	Design and model combinational and sequential Circuits using VHDL for	Applying
C314.6	Design Counters and Registers using Digital ICs and model using VHDL.	Applying

CO	Subject: Antenna and Wave Propagation	TAXONOMY
Student should be able to		
C315.1	Describe all the basic parameters of an antenna	Applying
C315.2	Analyze the parameters of linear wire antennas and explain the antenna	Analyzing
C315.3	Design and analyze various antenna arrays	Creating
C315.4	Explain the operation of non resonant antennas	Understanding
C315.5	Describe about VHF, UHF and Microwave antennas and its measurements.	Applying
C315.6	Explain the characteristics of radio wave propagation	Understanding

CO No	Subject: PDC Lab	TAXONOMY
Student should be able to		
C316.1	Design linear and non linear wave shaping circuits	Analyzing
C316.2	Design transistor as a switch	Analyzing
C316.3	Examine the functionality of combinational and sequential logic circuits	Analyzing
C316.4	Examine the performance of sampling gates	Analyzing
C316.5	Design astable,bistable and monostable multivibrators using transistors	Applying
C316.6	Design UJT relaxation oscillator and bootstrap sweep circuit	Applying

CO	Subject: LICA Lab	TAXONOM
Student should be able to		
C317.1	Design and construct adder,substractor,comparator,integrator and differentiator using op-amp	Analyzing
C317.2	Design and construct different types of active filters	Applying
C317.3	Design and construct different oscillator circuits and function generator using	Applying
C317.4	Design and construct different multivibrators using IC555 timer	Understandin
C317.5	Use IC565 for PLL, IC 566 for VCO,IC 723 for voltage regulator	Understandin
C317.6	Design 4-bit DAC using op-amp	Applying

CO No	Subject: DSD & DICA Lab	TAXONOMY
Student should be able to		
C318.1	Implement & Design Logic Gates By Using Vhdl Or Hardware	Applying
C318.2	Implement & Design 3 To 8 Decoder -74138 By Using Vhdl Or Hardware.	Applying
C318.3	Implement & Design 8 X 1 Multiplexer By Using Vhdl Or Hardware	Applying
C318.4	Implement & Design D-Flipfloop By Using Vhdl Or Hardware	Applying
C318.5	Implement & Design Shiff Register By Using Vhdl Or Hardware	Applying
C318.6	Implement &Design ALU By Using Vhdl Or Hardware	Applying

CO	Subject: IPR	TAXONOMY
Student should be able to		
C319.	Identify different types of Intellectual Properties (IPs), the right of ownership,	understanding
C319.	Recognize the crucial role of IP in organizations of different industrial sectors	understanding
C319.	Identify activities and constitute IP infringements and the remedies available to	understanding
C319.	Describe the precautious steps to be taken to prevent infringement of	understanding
C319.	Explain importance of IP in products and technology development.	understanding
C319.	Be familiar with the processes of Intellectual Property Management (IPM) and	Applying

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AY: 2017-18   SEM:II   YEAR: III

CO	Subject: Micro Processors & Micro Controllers	Taxonomy
Student should be able to		
C321.1	Analyze the basic architecture, various activities and formats of 8086 microprocessor.	Analyzing
C321.2	Implement programs for 8086 Microprocessor based systems for real time applications using low-level language like ALP.	Applying
C321.3	Apply the interfacing concepts of 8086 microprocessor with different peripherals.	Applying
C321.4	Analyze the features of advanced processors and Pentium processors.	Understanding
C321.5	Analyze the features and programming tools of 8051	Understanding
C321.6	Discuss the features of PIC microcontrollers and 32-bit ARM	Creating

CO No	Subject: Digital Signal Processing	Taxonomy level
	Student should be able to	
C322.1	Examine discrete-time signals and systems, linear constant coefficient difference equation and frequency domain representation.	Analyzing
C322.2	Analyze Discrete Fourier Series, Discrete Fourier Transform and Fast Fourier Transform algorithms	Analyzing
C322.3	Design structures for digital filters and solve difference equations using Z-Transforms.	Evaluating
C322.4	Design digital IIR filter using analog filter and digital FIR filter using windowing techniques.	Evaluating
C322.5	Distinguish Decimation and interpolation for Multi-rate signal processing	Analyzing
C322.6	Describe DSP processors, memory architecture for DSP, addressing modes and registers	Understanding

CO No	Subject: Digital Communications	TAXONOMY
Student should be able to		
C323.1	Define the fundamentals of digital communication system.	Remembering
C323.2	Explain the working of different digital modulation and demodulation	Understanding
C323.3	Analyze the performance of baseband and pass band digital	Analyzing
C323.4	Analyze The Information Theory In Communication Systems	Analyzing
C323.5	Analyze various source coding techniques for data transmission and	Analyzing
C323.6	Apply linear block codes and convolution codes for data transmission and	Applying

CO No	Subject: Micro Wave Engineering	Taxonomy
	Student should be able to	
C324.1	Evaluate the Expression for fields in TE and TM modes in	Evaluating
C324.2	Evaluate the Expression for fields in TE and TM modes Circular	Evaluating
C324.3	Develop the S-Matrix of Microwave components.	Evaluating
C324.4	Understand the operation of various types of O-type microwave	Understandin
C324.5	Understand the operation of various types HELIX TWTS, M-type	Understandin
C324.6	Describe about microwave solid state devices their classification,	Understandin

CO No	Subject: Bio-Medical Engineering	Taxonomy level
	Student should be able to	
C325.1	understanding of biomedical potentials	understandin g
C325.2	Analyze electrodes and transducers	Analyzing
C325.3	Analysis about cardiovascular system and respiratory system	Analyzing
C325.4	examine the patient in ICU and hospital and understanding therapeutic devices and prosthetic devices	Applying
C325.5	understanding of diagnostic techniques and bio telemetry	understandin g
C325.6	evaluating the working of monitors and recorders and prevention from shock	Evaluating

CO No	Subject: MPMC Lab	Taxonomy level
	Student should be able to	
C326.1	Understand the concepts on hardware and software/programming of amicroprocessor.	Understandin g
C326.2	Apply assembly language programming skills for simple and complex calculations	Applying
C326.3	Design the interfacing of peripherals with microprocessor.	Creating
C326.4	Understand the concepts on hardware and software/programming of amicrocontroller	Understandin g
C326.5	Design the circuit for interfacing of peripherals with microcontroller	Creating
C326.6	Design the circuit for interfacing of ADC & DAC with microcontroller.	Creating

CO No	Subject: DC Lab	Taxonomy level
	Student should be able to	
C327.1	Analyze the pulse digital modulation techniques	Analysis
C327.2	Illustrate modulation,demodulation,noise handling, data conversion and multiplexing In pass band transmission.	Application
C327.3	Analyze need of compression and expansion in digital communication	Analysis

C327.4	Apply the various coding techniques on transmission medium in digital communication	
		Application

CO No Student should be able to	Subject: DSP Lab	Taxonomy level
C328.1	Understand the hadling of discrete/ digital signal using matlab	Understanding
C328.2	Understand the basic operations of signal processing	Understanding
C328.3	Analyse the spectrum parameters of window function	Analyzing
C328.4	Design IIR,FIR filter for band pass ,band stop ,low pass ,highpass filter	Applying
C328.5	Design signal processing algorithm using matlab	Applying
C328.6	Develp and implement DSP alogorithm in software using a computer language such as c with TMS320C671 floating point processor	Applying

CO No Student should be able to	Subject: SEMINAR	Taxonomy level
C329.1	Interpret logical progression of the paper and present with suitable presentation	Application

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RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINNERING

AY: 2017-18   SEM:1   YEAR: IV

CO No	Subject: VLSI Design	TAXONOMY
Student should be able to		
C411.1	Describe the IC Technologies and various MOS fabrication techniques	Understanding
C411.2	Design N-MOS, P-MOS & C-MOS stick and layout diagrams with various	Applying
C411.3	Measure the various types of sheet resistance concept applied to MOS	Remembering
C411.4	Describe the subsystem design processes	Understanding
C411.5	Describe the concepts of VLSI Design issues.	Understanding
C411.6	Develop the FPGA architecture and its design process.	Applying

CO No	Subject: Computer Networks	TAXONOMY
Student should be able to		
C412.1	Illustrate the different network models with examples	Analyzing
C412.2	Evaluate the performance of different guided and unguided media	Analyzing
C412.3	Explain the concept of ALOHA,MAC	Understanding
C412.4	Analyze the different types of routing algorithms	Analyzing
C412.5	Differentiate the concept of TCP and UDP protocols	Analyzing
C412.6	Illustrate the different network models with examples	Analyzing

CO No	Subject: Digital Image Processing	TAXONOMY
Student should be able to		
C413.1	Apply transform techniques on images.	Applying
C413.2	Analyze spatial and frequency domain filtering on images.	Analyzing
C413.3	Apply image restoration operations on images.	Applying
C413.4	Develop coding techniques for image compression and wavelet based	Applying
C413.5	Develop morphological operations and segmentation techniques on	Applying
C413.6	Analyze color conversions on images and code images to achieve good	Analyzing

CO No	Subject: Computer Architecture & Organization	TAXONOMY
Student should be able to		
C414.1	Demonstrate the designing of arithmetic and logic unit of CPU.	Understanding
C414.2	Explain the Instruction formats, instruction cycle and stack organization.	Understanding
C414.3	Apply hardwired and micro programmed control to design control unit.	Applying
C414.4	Classify the different types of memory systems to understand the memory	Understanding
C414.5	Define the different I/O modules and their interfacing	Remembering
C414.6	Analyze and Design pipelined control units	Analyzing

CO No	Subject: Radar Systems	TAXONOMY
Student should be able to		
C415.1	Explain the radar range equation and performance characteristics.	Understanding
C415.2	Analyze the operation and applications of CW and FMCW radars.	Analyzing
C415.3	Analyze the operation of MTI and Pulse Doppler Radars	Analyzing
C415.4	Analyze the concept of different Radar tracking methods.	Analyzing
C415.5	Derive the characteristics of a matched filter and distinguish different phased	Remembering
C415.6	Distinguish different types of displays, duplexers and antennas used in radar	Analyzing

CO No	Subject: Optical Communication	TAXONOMY
Student should be able to		
C416.1	Analyze the light propagation mechanism in a fiber and distinguish various types of	Analyzing
C416.2	Choose fiber materials and estimates the attenuation and dispersion in an optical fiber	RememberingG
C416.3	Connect optical fibers and analyze the fiber alignment and joint loss	Analyzing
C416.4	Describe how different types of optical sources and photo detectors are used for the development of better light wave systems	Understanding
C416.5	Determines the power coupling efficiency and analyzes the Digital receiver Performance	Evaluating
C416.6	Choose components to design an optical system and measures attenuation and dispersion in a fiber.	Remembering

CO	Subject: VLSI Lab	TAXONOM
Student should be able to		
C417.	Design and implementation of logic gates	Creating
C417.	Design and implementation of combinational circuits	Creating
C417.	Design and implementation of lathes	Creating
C417.	Design and implementation of RAM cell and differential amplifier	Creating
C417.	Design and implementation of counter	Creating
C417.	Design and implementation of oscillator	Creating

CO	Subject: MWE Lab	TAXONOM
Student should be able to		
C418.	Describe the Basic microwave bench set up	Understandin
C418.	Observe the characteristics of Reflex Klystron & Gunn diode	Analyzing
C418.	Calculate VSWR , wavelength, impedance, frequency of waveguide	Evaluating
C418.	Measure the scattering parameters of microwave devices.	Evaluating
C418.	Measure the losses in fibers and NA	Evaluating
C418.	Observe VI characteristic of with optical sources	Analyzing

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CO No	Subject: Cellular Mobile Communication	Taxonomy level
Student should be able to		
C421.1	Analyze analog and digital cellular radio systems for mobile communication	Analyzing
C421.2	Design a cellular system using frequency reuse concept and cell coverage for Signal traffic	Evaluating
C421.3	Design the antenna system parameters by considering the effects in the reduction of C/I ratio	Evaluating
C421.4	Apply frequency management and channel allocation schemes to improve the trunking efficiency	Applying
C421.5	Analyze the Concepts of Handoff, cell splitting and operation of cellular system	Analyzing
C421.6	Describe digital cellular networks.	Understanding

CO	Subject: Electronic Measurements and Instrumentation	Taxonomy
Student should be able to		
C422.	Understand a system, Component or process to meet desired needs in electrical	Understandi
C422.	Analyze different signal generators and analyzers	Analyzing
C422.	Understand the design of oscilloscopes for different applications	Understandi
C422.	Ability to balance Bridges to find unknown values.	Analyzing
C422.	Design different transducers for measurement of different parameters.	Creating
C422.	Design and measure strain, displacement, Velocity, Angular Velocity,	Creating

CO No	Subject: Embedded systems	Taxonomy level
Student should be able to		
C423.1	Explain the basic concepts and applications of embedded systems.	Understanding
C423.2	Distinguish all communication devices in embedded system, other peripheral device	Analyzing
C423.3	Analyze embedded firmware design approaches and development languages.	Analyzing
C423.4	Analyze real time operating systems with examples of Task Communication, Synchronization	Analyzing
C423.5	Explain the embedded software development tools.	Understanding
C423.6	Design, implement and test an embedded system.	Creating

CO No	Subject: Wireless Sensors and Networks	Taxonomy level
Student should be able to		
C424.1	Apply knowledge of wireless sensor networks to various applications	Applying
C424.2	Design and implement the wireless sensor networks	Creating
C424.3	Conduct performance analysis of wireless sensor networks	Evaluating
C424.4	learn transport layer protocols for sensor networks and design requirements	Understanding
C424.5	Explain the sensor management, sensor networks middle ware	Understanding
C424.6	formulate and solve the problems creatively in the areas of wireless sensor networks	Creating

	Project & Seminar	Taxonomy level
Student should be able to		
C425.1	Develop applications in various areas for societal needs	Creating
C425.2	Develop skills for analyzes and synthesis of practical systems	Creating
C425.3	Acquire the use of new tools effectively and creatively	Creating
C425.4	Work in team to carry out analysis and cost effective ,environmental friendly designs of engineering systems	Creating
C425.5	Write technical /project reports and oral presentation of the work done to an audience	Creating
C425.6	Domenstrate a product developed	Creating

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