



# RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS::ONGOLE

(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 I Semester

A.Y:2020-21

CO. No	Subject: Communicative English	Taxonomy Level
At the end of the course, the student will be able to		
C111.1	Understand social or transactional dialogues spoken by native speakers of English and identify the context, topic, and pieces of specific information.	Understanding
C111.2	Recall the familiar topics and general questions to the students	Remembering
C111.3	Rephrase suitable strategies for note-making to locate specific information.	Understanding
C111.4	Identify the paragraph structure and able to match beginning/sending/heading with paragraph.	Applying
C111.5	Make use of grammatical structure and correct word forms.	Applying

CO.NO.	Subject : Mathematics-I	Taxonomy Level
After successful completion of this course students will be able to:		
C112.1	Test the convergence of an infinite series, utilize mean value theorems to real life problems and express a function in terms of power series.	Applying
C112.2	Solve first order and first degree differential equations arising in various Engineering fields.	Applying
C112.3	Solve linear differential equations of higher order and use the knowledge to study LCR Circuits and SHM.	Applying
C112.4	Apply the techniques of multivariable differential calculus to determine extrema and series Expansions of a function of several variables.	Applying
C112.5	Using multiple integrals to find areas, surface areas and volumes.	Applying

CO. No	Subject: Applied Chemistry	Taxonomy Level
After successful completion of this course students will be able to :		
C113.1	Analyze different types of composite materials and the preparation, properties and applications of the polymers.	Analysing
C113.2	Apply the knowledge of using redox chemistry in storage devices (batteries) and techniques used for preventing corrosion.	Applying
C113.3	Summarize the importance of materials like nanomaterials, superconductors, liquid crystals and semiconductors.	Understanding





C113 4	Analyze the principles and applications of analytical techniques and different types of nonconventional energy sources.	Analysing
C113 5	Demonstrate the importance of molecular machines and computational chemistry.	Understanding

Subject: Programming for Problem Solving Using C		Taxonomy Level
After successful completion of this course students will be able to :		
C114.1	To use different operators, data types and write programs that use two-way/ multiway selection	Applying
C114.2	To select the best loop construct for a given problem.	Applying
C114.3	To design and implement programs to analyze the different pointer applications	Analyzing
C114.4	To decompose a problem into functions and to develop modular reusable code	Analyzing
C114.5	To apply file, I/O operations	Applying

CO No.	Subject: Engineering Drawing	Taxonomy Level
After going through this course the student will be able to		
C115.1	Draw different regular polygons, engineering curves and scales to match with relevant applications.	Applying
C115.2	Draw orthographic projections of points and lines inclined to both the planes and apply them in related problems.	Applying
C115.3	Draw orthographic projections of various planes inclined both the reference planes.	Understanding
C115.4	Draw projections of different solids like prisms, pyramids, cylinders and cones with axis inclined to both the reference	Understanding
C115.5	Convert isometric views in to orthographic views and vice versa and generate 2D/3D objects in AutoCAD.	Applying

CO. No	Subject: English Lab	Taxonomy Level
After going through this course the student will be able to		
C116.1	Develop phonetic sounds and uses.	Applying
C116.2	Recall words stress and syllabic words.	Remembering
C116.3	Classify Rhythm an intonation.	Understanding
C116.4	Utilize the knowledge of contrastive word str	Applying



C116.5	Compose weak and strong forms.	Creating
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CO.NO.	Subject: Applied Chemistry lab	Taxonomy Level
After going through this course the student will be able to		
C117.1	Describe the experimental skills to design new experiments in engineering	Understanding
C117.2	Explain the different types of titrations and acquire skills in instrumentation	Understanding
C117.3	Determine hardness of various water samples.	Evaluating
C117.4	Determine the number of free ions and charges in a mixture of acids using conductivity meter.	Evaluating
C117.5	Calculate the potential between reference electrode and unknown solution by using potentiometer.	Evaluating

Subject : Programming for Problem Solving Using C lab		Taxonomy Level
After going through this course the student will be able to		
C118.1	Gains knowledge on various concepts of a C Language.	Understanding
C118.2	Able to draw flow charts and write algorithms.	Applying
C118.3	Able to design and development for C problem solving skills.	Applying
C118.4	Able to design and develop modular programming skills.	Applying
C118.5	Able to trace and debug a program.	Applying

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Head of the Department  
Department of S&H  
RISE Krishna Sai Prakasam  
Group of Institutions  
VALLURU, ONGOLE A.P.







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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:2020-21

CO. No.	Subject: Mathematics-II	Taxonomy Level
After going through this course the student will be able to		
C121.1	Solve system of linear algebraic equations using matrix techniques and find Eigen values and Eigen vectors.	Applying
C121.2	Use Cayley-Hamilton theorem to find inverse and higher powers of matrices and study the nature of Quadratic forms.	Applying
C121.3	Evaluate a root of algebraic and transcendental equations and a solution for system of equations using numerical methods.	Evaluating
C121.4	Apply Newton's interpolation and Lagrange's interpolation formula to find interpolating polynomial.	Applying
C121.5	Evaluate the solutions of ordinary differential equations to its analytical computations using different methods.	Evaluating

CO. NO	Subject: Applied Physics	Taxonomy Level
After successful completion of this course students will be able to:		
C122.1	Analyze the differences between interference and diffraction with applications	Analyzing
C122.2	Explain the fundamental concepts of quantum mechanics.	Understanding
C122.3	Explain the various electron theories .	Understanding
C122.4	Classify the energy bands of semiconductors	Understanding
C122.5	Explain the applications of dielectric and magnetic materials	Understanding





CO. NO	Subject: OBJECT ORIENTED PROGRAMMING THROUGH JAVA	Taxonomy Level
After successful completion of this course students will be able to:		
C123.1	Show competence in the use of the Java programming language in the development of small to medium- sized application programs that demonstrate professionally acceptable coding and	Analyzing
C123.2	Illustrate the basic principles of the object-oriented programming	Applying
C123.3	Demonstrate an introductory understanding of graphical user interfaces, multithreaded programming, and event-driven programming.	Analyzing

CO. NO	Subject : Network Analysis	Taxonomy Level
After successful completion of this course students will be able to:		
C124.1	Student able to explain the basic network elements and analyze the performance of periodic waveforms	Analyzing
C124.2	Student will analyze the filter design concepts in real world applications.	Analyzing
C124.3	Student able to analyze the coupled circuit and resonance	Analyzing
C124.4	Student will apply theorems for electrical circuits both ac and dc	Applying
C124.5	Student Gain the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).	Evaluating

CO. NO	Subject : Basic Electrical Engineering	Taxonomy Level
After going through this course the student will be able to		
C125.1	Explain the operation of DC generator and DC motor analyze the characteristics of DC generator and speed control methods of DC motors.	Understanding
C125.2	Understand the constructional details, principle of operation and performance of transformers.	Understanding
C125.3	Explain the principle of operation, construction and details of synchronous machines	Understanding
C125.4	Explain the principle of operation, constructional details, performance, torque – slip characteristics and starting methods of 3-phase induction motors	Understanding





C125.5	Understand the operation of various special machines	Understanding

CO No.	Subject : Electronic Work shop	Taxonomy level
After going through this course the student will be able to		
C126.1	Identification of various electronic components and equipment	Remembering
C126.2	Implimenting Soldering practice using tool kit	Analyzing
C126.3	Design and implement PCB layout	Applying
C126.4	Test various active and passive components	Analyzing
C126.5	Understand equitence and measurements on CRO	Understanding

CO No.	Subject :Basic Electrical Engineering Lab	Taxonomy level
After the completion of this course the student will be able to		
C127.1	Determine and predetermine the performance of DC machines and transformers.	Evaluating
C127.2	Control the DC shunt machines.	Evaluating
C127.3	Compute the performance of 1-phase transformer.	Evaluating
C127.4	Perform tests on 3-phase induction motor and alternator to determine their performance characteristics.	Evaluating

O. NO	Subject : Applied Physics Lab	Taxonomy level
After the completion of this course the student will be able to		
C128.1	Apply the basic concepts of mechanics to determine rigidity modulus of a material by using Torsional pendulum.	Applying
C128.2	Apply the basic concepts of laser and techniques for the Diffraction Grating.	Applying





C128.3	Apply the basic concepts of magnetism to study the variation of B versus H.	Applying
C128.4	Apply the basic concepts of dielectrics to determine dielectric constant by charging and discharging method.	Applying
C128.5	Apply the mathematical concepts/equations to obtain quantitative results	Evaluating

O.NO.	Subject: Environmental Studies	Taxonomy Level
After going through this course the student will be able to		
C119.1	Explain the concepts of the ecosystem and its functions in the environment.	Understanding
C119.2	Summarize the natural resources and their importance for the sustenance of life & need to conserve the natural resources.	Understanding
C119.3	Demonstrate the values, threats, conservation practices to protect the biodiversity	Applying
C119.4	Describe various attributes of the pollution and their impacts and measures to reduce pollution along with waste management practices.	Remembering
C119.5	Evaluate social issues both rural and urban environment and the possible means to combat the challenges, with help of environmental legislations of India	Evaluating

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Head of the Department  
Department of S&H  
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Group of Institutions  
VALLURU, ONGOLE A.P.





# RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



AY: 2020-21

SEM:I

YEAR: II

## COURSE OUTCOMES

CO No	Subject: Electronic Devices and Circuits	TAXONOMY LEVEL
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 junction as diode in different modes of operation.	Understanding
C211.3	Describe the construction, working principle of rectifiers with and	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	Applying

CO No	Subject: Switching Theory & Logic Design	TAXONOMY LEVEL
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	Applying
C212.4	Develop a PLD for the given Boolean functions	Applying
C212.5	Design different sequential circuits	Applying

CO No	Subject: Signals & Systems	TAXONOMY LEVEL
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	Understand the relationships among the various representations of LTI systems	Understanding
C213.5	Understand the Concepts of convolution, correlation, Energy and Power density and	Understanding





C/CO No	Subject: OOPS Through Java	TAXONOMY LEVEL
Student should be able to		
C214.1	Able to realize the concept of Object Oriented Programming & Java Programming Constructs.	Understanding
C214.2	Able to describe the basic concepts of Java such as operators, classes, objects,	Understanding
C214.3	Apply the concept of exception handling and Input/ Output operations.	Applying
C214.4	Able to design the applications of Java & Java applet.	Applying
C214.5	Able to Analyze & Design the concept of Event Handling and Abstract	Applying

C/CO No	Subject: Random variables & Stochastic Process	TAXONOMY LEVEL
Student should be able to		
C215.1	Describe the Random Variables and Solve Simple Probabilistic Problems.	Understanding
C215.2	Illustrates the different types of Moments and Transformations of Random	Analyzing
C215.3	Applying Distributions. Density And Moments Theory for multiple Random	Applying
C215.4	Determine and Explain the Random Process and Stationary Levels	Applying
C215.5	Evaluating the Different types of Correlations and their Spectral and	Analyzing

C/CO No	Subject: Managerial Economics & Financial Analysis	TAXONOMY LEVEL
Student should be able to		
C216.1	Relate economic principles with business Practices forgetting successful outcomes.	Remembering
C216.2	Make use of cost analysis to find breakeven point.	Applying
C216.3	Compare the price-out determinations under different competitions in the market and pricing strategies	Understanding
C216.4	Make use of financial statements and the relevant ratios for evaluating companies financial performance to make optimal decisions.	Applying
C216.5	Illustrate different capital budgeting methods to estimate the best investment decisions in business practices.	Understanding

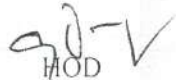




CO No	Subject: EDC Lab	TAXONOMY LEVEL
Student should be able to		
C217.1	Identifying of electronic components and electronic equipment	Remember
C217.2	Analyzing characteristics of different diodes and transistors	Understanding
C217.3	Describe application of diode	Applying
C217.4	Analyze the different 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: STLD Lab	TAXONOMY LEVEL
Student should be able to		
C218.1	Verify the truth tables of Logic Gates	Applying
C218.2	Verify the truth table of Combinational logic function and Full adder	Applying
C218.3	Verify the Combinational logic circuits Decoder and Mux	Applying
C218.4	Verify the Sequential Logic circuits	Applying

  
COORDINATOR

  
HOD  
Head of the Department  
Electronics and Communication Engineering  
RISE Krishna Sai Prakasham Group  
of Institutions, VALLURU-523 272





**RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS**  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



AY: 2020-21

SEM:II

YEAR: II

**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

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

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 conditions	Remembering





CO No	Subject: Analog Communications	Taxonomy level
Student should be able to		
C22.1	Understand the fundamentals of analog communication systems..	Understanding
C22.2	Demonstrate various amplitude modulation and demodulation schemes and compare their spectral characteristics	Understanding
C22.3	Understand the power and bandwidth requirements of FM and compare with AM	Understanding
C22.4	Analyze various functional blocks of transmitters and receivers	Analyzing
C22.5	Analyze noise characteristics of various analog modulation schemes	Analyzing

CO No	Subject: Computer Architecture and Organization	Taxonomy level
Student should be able to		
C225.1	Demonstrate evolution of the computer and Explain the performance of the computer system.	Understanding
C225.2	Explain Instruction formats and decode the register transfer notations and assembly language notations.	Understanding
C225.3	Apply different types of addressing modes to address an operand of Arithmetic and Logic Instructions, Branch Instructions.	Applying
C225.4	Define the different I/O modules and their interfacing	Remembering
C225.5	Classify the different types of memory systems to understand the memory organization in CPU	Understanding

CO No	Subject: Management and Organizational Behavior	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

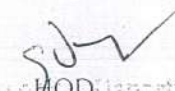




CO No	Subject: ECA Lab	Taxonomy level
Student should be able to		
C227.1	Design small signal single stage amplifiers and then observe it's frequency	Analyzing
C227.2	Design multi stage amplifiers and then observe it's frequency response.	Analyzing
C227.3	Design feedback amplifiers and then observe it's 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

  
COORDINATOR

  
Head of MOD Department  
Electronics and Communication Engineering  
RISE Krishna Sai Prakasam Group  
of Institutions, VALLURU- 523 272







**RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS**  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

AY: 2020-21

SEM:I

YEAR: III

**COURSE OUTCOMES**

CO No.	Subject: Computer Architecture and Organization	TAXONOMY LEVEL
After going through this course the student will be able to		
C311.1	Demonstrate evolution of the computer and Explain the performance of the computer	Understanding
C311.2	Explain Instruction formats and decode the register transfer notations and assembly	Understanding
C311.3	Apply different types of addressing modes to address an operand of Arithmetic and	Applying
C311.4	Define the different I/O modules and their interfacing	Remembering
C311.5	Classify the different types of memory systems to understand the memory	Understanding
C311.6	Analyze hardwired and micro programmed control to design control unit.	Analyzing

CO No	Subject: Linear I C Applications	TAXONOMY LEVEL
Student should be able to		
C312.1	Analyze the characteristics of differential amplifiers	Analyzing
C312.2	Analyse the DC&AC characteristics of OP-Amp	Analyzing
C312.3	Design linear and nonlinear applications of op-amps	Applying
C312.4	Design Active filters using opamps	Applying
C312.5	Implement the applications of special IC's like Timer and PLL	Applying
C312.6	Analyze the conversion techniques of DAC and ADC using op-amps	Analyzing

CO No	Subject: Digital I C Applications	TAXONOMY LEVEL
Student should be able to		
C313.1	Explain the concepts of logic families used in ics	Understanding
C313.2	Develop digital logic with vhdl simulation and synthesis	Applying
C313.3	Develop vhdl applications by using different statements	Applying
C313.4	Design the combinational circuits using vhdl for real time applications	Applying
C313.5	Design the sequential circuits using vhdl for real time applications	Applying
C313.6	Design state diagrams state tables state reduction with the help of mealy and	Applying





CO No	Subject: Digital Communications	TAXONOMY LEVEL
Student should be able to		
C31-41	Analyse the performance of dc system using pulse digital modulation techniques	Analyzing
C31-42	Analyse digital transmission methods and detection techniques for base band transmission	Analyzing
C31-43	Evaluate the error performance of digital modulation schemes	Understanding
C31-44	Analyse the information theory in communication systems	Analyzing
C31-45	Apply source coding technique on transmission medium in digital communication system	Applying
C31-46	Apply the channel coding techniques in digital communication system in order to provide	Applying

CO No	Subject: Antenna and Wave Propagation	TAXONOMY LEVEL
Student should be able to		
C3 15.1	Describe all the basic parameters of an antenna	Understanding
C3 15.2	Analyze the parameters of linear wire antennas and explain the antenna theorems	Analyzing
C3 15.3	Design and analyze various antenna arrays	Analyzing
C3 15.4	Explain the operation of non resonant antennas	Understanding
C3 15.5	Describe about VHF, UHF and Microwave antennas and its measurements.	Understanding
C3 15.6	Explain the characteristics of radio wave propagation	Understanding

CO No	Subject: PDC Lab	TAXONOMY LEVEL
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 No	Subject: LICA Lab	TAXONOMY LEVEL
Student should be able to		
C31 7.1	Design and construct adder, subtractor, comparator, integrator and differentiator using op-amp	Analyzing
C31 7.2	Design and construct different types of active filters	Applying
C31 7.3	Design and construct different oscillator circuits and function generator using IC 741	Applying
C31 7.4	Design and construct different multivibrators using IC555 timer	Understanding
C31 7.5	Use IC565 for PLL, IC 566 for VCO, IC 723 for voltage regulator	Understanding
C31 7.6	Design 4-bit DAC using op-amp	Applying

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

  
COORDINATOR

  
HOD

Head of Department  
Electronics and Communication Engineer  
RISE Krishna Sai Prakasam Group  
of Institutions, VALLURU- 523 272





**RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS**  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



AY: 2020-21

SEM:II

YEAR: III

**COURSE OUTCOMES**

CO No	Subject: Micro Processors & Micro Controllers	Taxonomy level
Student should be able to		
C321.1	Analyze the basic architecture, various activities and formats of 8086	Analyzing
C321.2	Implement programs with an assembler for 8086 Microprocessor based systems on 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 and architectural differences of advanced microprocessors	Analyzing
C321.5	Analyze the features, programming tools and assembly language programming of	Analyzing
C321.6	Discuss the characteristics and instruction set of PIC microcontrollers	Creating

CO No	Subject: Micro Wave Engineering	Taxonomy level
Student should be able to		
C322.1	Evaluate the Expression for fields in TE and TM modes in Rectangular	Evaluating
C322.2	Evaluate the Expression for fields in TE and TM modes Circular waveguides,	Evaluating
C322.3	Understand the operation of various types of O-type microwave tubes.	Understanding
C322.4	Understand the operation of various types HELIX TWTS, M-type tubes.	Understanding
C322.5	Develop the S-Matrix of Microwave components.	Evaluating
C322.6	Describe about microwave solid state devices their classification, operation and	Understanding

CO No	Subject: VLSI Design	Taxonomy level
Student should be able to		
C323.1	Describe the IC Technologies and various MOS fabrication techniques	Understanding
C323.2	Design N-MOS, P-MOS & C-MOS stick and layout diagrams with various	Creating
C323.3	Measure the various types of sheet resistance concept applied to MOS transistor.	Evaluating
C323.4	Describe the chip inputs, outputs and its testability	Understanding
C323.5	Describe FPGA design	Understanding
C323.6	Describe Low Power VLSI Design	Understanding





CO No	Subject: Digital Signal Processing	Taxonomy level
Student should be able to		
C324.1	Examine discrete-time signals and systems, linear constant coefficient difference equation and frequency domain representation.	Analyzing
C324.2	Analyze Discrete Fourier Series, Discrete Fourier Transform and Fast Fourier Transform algorithms	Analyzing
C324.3	Design structures for digital filters and solve difference equations using Z-Transforms.	Evaluating
C324.4	Design digital IIR filter using analog filter and digital FIR filter using windowing techniques.	Evaluating
C324.5	Distinguish Decimation and interpolation for Multi-rate signal processing.	Analyzing
C324.6	Describe DSP processors, memory architecture for DSP, addressing modes and registers	Understanding

CO No	Subject: Bio-Medical Engineering	Taxonomy level
Student should be able to		
C325.1	Explain the concepts of bio medical potentials	Understanding
C325.2	Classify the different types of electrodes and transducers	Understanding
C325.3	Analysis about cardiovascular system and respiratory system	Analyzing
C325.4	Explain about patient care monitoring therapeutic devices and prosthetic devices	Evaluating
C325.5	Illustrate diagnostic techniques and bio telemetry	Understanding
C325.6	Demonstrate monitors and recorders and shocking Hazards	Understanding

CO No	Subject: IPR & Patents	Taxonomy level
Student should be able to		
C329.1	Define different Intellectual Properties rights and agencies for registration.	Remembering
C329.2	List out the formalities of copyright registration	Remembering
C329.3	Outline the process of patent for the protection of software and innovations.	Understanding
C329.4	Classify dilution of ownership to protect the trademark.	Understanding
C329.5	Define the trade secrete laws for employees confidentiality	Remembering
C329.6	Illustrate Cybercrime with example and how to secure data.	Understanding





CO No	Subject: MPMC Lab	Taxonomy Level
Student should be able to		
C326.1	Understand the concepts on hardware and software/programming of a microprocessor.	Understanding
C326.2	Apply assembly language programming skills for simple arithmetic & logical calculations.	Applying
C326.3	Apply assembly language programming skills for complex calculations	Applying
C326.4	Design the interfacing of peripherals with 8086 microprocessor.	Creating
C326.5	Understand the concepts on hardware and software programming of microcontroller 8051	Understanding
C326.6	Design the circuit for interfacing of peripherals with 8051 microcontroller	Creating

CO No	Subject: VLSI Lab	Taxonomy level
Student should be able to		
C327.1	Design and implementation of logic gates	Creating
C327.2	Design and implementation of full adder and full subtractor	Creating
C327.3	Design and implementation of latches	Creating
C327.4	Design and implementation of static RAM cell and counter	Creating
C327.5	Design and implementation of combinational circuits	Creating
C327.6	Design and implementation of digital to analog converter	Creating

CO No	Subject: DC Lab	Taxonomy level
Student should be able to		
C328.1	Analyze the pulse digital modulation techniques	Analyzing
C328.2	Illustrate modulation, demodulation, noise handling, data conversion and multiplexing in pass band transmission.	Applying
C328.3	Analyze need of compression and expansion in digital communication	Analysis
C328.4	Apply the various coding techniques on transmission medium in digital communication	Applying

COORDINATOR



HOD  
 Electronics and Communication Engineering  
 RISE Krishna Sai Prakasham  
 of Institutions, VALLURU-523 272



# RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



AY: 2020-21

SEM:I

YEAR: IV

## COURSE OUTCOMES

CO No	Subject: RADAR SYSTEM	TAXONOMY LEVEL
Student should be able to		
C411.1	Explain the radar range equation and performance characteristics.	Understanding
C411.2	Analyze the operation and applications of CW and FMCW radars.	Analyzing
C411.3	Analyze the operation of MTI and Pulse Doppler Radars	Analyzing
C411.4	Analyze the concept of different Radar tracking methods.	Analyzing
C411.5	Derive the characteristics of a matched filter and distinguish different phased	Remembering
C411.6	Distinguish different types of displays, duplexers and antennas used in radar	Analyzing

CO No	Subject: Digital Image Processing	TAXONOMY LEVEL
Student should be able to		
C412.1	Apply transform techniques on images.	Applying
C412.2	Analyze spatial and frequency domain filtering on images.	Analyzing
C412.3	Apply image restoration operations on images.	Applying
C412.4	Develop coding techniques for image compression and wavelet based	Applying
C412.5	Develop morphological operations and segmentation techniques on	Applying
C412.6	Analyze color conversions on images and code images to achieve good	Analyzing

CO No	Subject: COMPUTER NETWORKS	TAXONOMY LEVEL
Student should be able to		
C413.1	Illustrate the different network models with examples	Analyzing
C413.2	Evaluate the performance of different guided and unguided media	Analyzing
C413.3	Explain the concept of ALOHA,MAC	Understanding
C413.4	Analyze the different types of routing algorithms	Analyzing
C413.5	Differentiate the concept of TCP and UDP protocols	Analyzing
C413.6	Illustrate the different network models with examples	Analyzing





CO No	Subject: OPTICAL COMMUNICATION	TAXONOMY LEVEL
Student should be able to		
C414.1	Analyze the light propagation mechanism in a fiber and distinguish various	Analyzing
C414.2	Choose fiber materials and estimates the attenuation and dispersion in an	Remembering
C414.3	Connect optical fibers and analyze the fiber alignment and joint loss	Analyzing
C414.4	Describe how different types of optical sources and photo detectors are used	Understanding
C414.5	Determines the power coupling efficiency and analyzes the Digital receiver	Analyzing
C414.6	Choose components to design an optical system and measures attenuation and	Remembering

CO No	Subject: TV ENGINEERING	TAXONOMY LEVEL
Student should be able to		
C415.1	Describe Television Fundamentals, picture tubes, Composite Video Signals.	Remembering
C415.2	Analyze Principles of TV Transmission and Reception.	Analyzing
C415.3	Interpret Vision, IF Subsystem, Receiver Sound System, TV Receiver Tuner	Understanding
C415.4	Discuss DTV, HDTV Producing, DTV Conversions and Compression	Remembering
C415.5	Analyze DTV Transmitter and Receiver with Standards.	Analyzing
C415.6	Describe Emerging Technologies and Standards in Video Processing.	Remembering

CO No	Subject: EMBEDDED SYSTEMS	TAXONOMY LEVEL
Student should be able to		
C416.1	Explain the basic concepts and applications of embedded systems.	Understanding
C416.2	Distinguish all communication devices in embedded system, other peripheral	Analyzing
C416.3	Analyze embedded firmware design approaches and development languages.	Analyzing
C416.4	Analyze real time operating systems with examples of Task Communication.	Analyzing
C416.5	Explain the embedded software development tools.	Understanding
C416.6	Design, implement and test an embedded system.	Applying


CO No	Subject: MWE Lab	TAXONOMY LEVEL
Student should be able to		
C417.1	Describe the Basic microwave bench set up	Understanding
C417.2	Observe the characteristics of Reflex Klystron & Gunn diode	Analyzing
C417.3	Calculate VSWR, wavelength, impedance, frequency of waveguide	Analyzing
C417.4	Measure the scattering parameters of microwave devices.	Analyzing
C417.5	Measure the losses in fibers and NA	Analyzing
C417.6	Observe VI characteristic of with optical sources	Analyzing





CO No	Subject: DSP Lab	TAXONOMY LEVEL
Student should be able to		
C418.1	Generate discrete time signals and verify convolution schemes.	Analyzing
C418.2	Simulate frequency analysis of N-point DFT using FFT algorithms	Analyzing
C418.3	Design digital filtering techniques and obtain frequency response.	Applying
C418.4	Understand the process of normalization of histogram and cross correlation	Understanding
C418.5	Apply different masks to extracted edges of objects in a given image	Analyzing
C418.6	Analyze Multirate Digital signal processing systems	Analyzing

  
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HOD  
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**RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS**  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



AY: 2020-21

SEM:II

YEAR: IV

**COURSE OUTCOMES**

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 No	Subject: Electronic Measurements and Instrumentation	Taxonomy level
Student should be able to		
C422.1	Understand a system, Component or process to meet desired needs in electrical engineering.	Understanding
C422.2	Analyze different signal generators and analyzers	Analyzing
C422.3	Understand the design of oscilloscopes for different applications	Understanding
C422.4	Ability to balance Bridges to find unknown values.	Analyzing
C422.5	Design different transducers for measurement of different parameters.	Creating
C422.6	Design and measure strain, displacement, Velocity, Angular Velocity, temperature, Pressure, Vacuum, and Flow.	Creating





CO No	Subject: Satellite communication	Taxonomy level
Student should be able to		
C423.1	Understanding the basics of satellite communication and its applications. Identifying Orbital mechanisms and launchings	Understanding
C423.2	Developing the satellite subsystems	Applying
C423.3	Developing various satellite link design	Applying
C423.4	Designing of satellite links and usage of multiple access techniques	Applying
C423.5	Understanding the concepts Earth station technology, Low earth orbit and GEO-Stationary satellite systems	Applying
C423.6	Identifying the Navigation systems and GPS standards	Understanding

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		
C426.1	Envisaging applications for societal needs	Evaluating
C426.2	Develops skills for analysis and synthesis of practical systems	Creating
C426.3	Acquire the use of new tools effectively and creatively	Creating
C426.4	Work in team to carry out analysis and cost-effective, environmental friendly designs of engineering systems	Creating
C426.5	Write Technical / Project reports and oral presentation of the work done to an audience	Evaluating
C426.6	Demonstrate a product developed	Creating

COORDINATOR



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