PARVATHAREDDY BABUL REDDY
VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE
(Autonomous)
(Affiliated to J.N.T.U.A, Approved by AICTE and Accredited by NAAC)
KAVALI – 524201, S.P.S.R Nellore Dist., A.P. India. Ph: 08626-243930
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Regulation:R23		
COURSE CODE	**NAME OF THE COURSE**	**K-LEVEL**
I-I SEM		
(23A11101A) LINEAR ALGEBRA & CALCULUS		
C111.1	Develop and use of matrix algebra techniques that are needed by engineers for practical applications.	**K3**
C111.2	Demonstrate the ability to compute eigen values and eigen vectors for square matrices using	**K3**
C111.3	Utilize mean value theorems to real life problems.	**K3**
C111.4	Familiarize with functions of several variables which are useful in optimization.	**K3**
C111.5	Familiarize with double and triple integrals of functions of several variables in two dimensions	**K3**
(23A11201A) COMMUNICATIVE ENGLISH		
C112.1	Make use of different listening strategies to comprehend conversations and short talks.	**K3**
C112.2	Comprehend discourse such as lectures and speeches.	**K3**
C112.3	Develop conversational skills in general, academic and professional contexts.	**K3**
C112.4	Build confidence to present themselves effectively in academic and professional presentations.	**K3**
C112.5	Take part in group discussions effectively.	**K3**
(23A02301A) BASIC ELECTRICAL & ELECTRONICS ENGINEERING		
C113.1	Understand the problem solving concepts associated to AC and DC circuits.	**K2**
C113.2	Analyze the operating principles of motors, generators, MC and MI instruments.	**K4**
C113.3	Apply the mathematical tool for different power generation mechanisms, Electricity billing concept	**K3**
C113.4	Explain the characteristics of diodes and transistors.	**K4**
C113.5	Familiarize with the number systems, codes, Boolean algebra and logic gates	**K3**
(23A05301A) INTRODUCTION TO PROGRAMMING		
C114.1	Understand basics of computers, the concept of algorithm and algorithmic thinking.	**K2**
C114.2	Analyse a problem and develop an algorithm to solve it.	**K4**
C114.3	Implement various algorithms using the C programming language.	**K3**
C114.4	Understand more advanced features of C language.	**K2**
C114.5	Develop problem-solving skills and the ability to debug and optimize the code.	**K3**
(23A03301A) ENGINEERING GRAPHICS		
C115.1	Understand the principles of engineering drawing, including engineering curves, scales,	**K2**
C115.2	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side	**K1**
C115.3	Understand and draw projection of solids in various positions in first quadrant.	**K2**
C115.4	Explain principles behind development of surfaces.	**K2**
C115.5	Prepare isometric and perspective sections of simple solids.	**K2**
(23A02302A) ELECTRICAL & ELECTRONICS ENGINEERING WORKSHOP		
C116.1	Understand the Electrical circuit design concept; measurement of resistance, power, power factor;	**K2**
C116.2	Apply the theoretical concepts and operating principles to derive mathematical models for circuits,	**K4**
C116.3	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and	**K3**
C116.4	Identify & testing of various electronic components along with characteristics of various electron	**K2**
C116.5	Explain the operation of a digital circuit.	**K2**

(23A05302A) COMPUTER PROGRAMMING LAB		
C117.1	Read, understand, and trace the execution of programs written in C language.	**K2**
C117.2	Select the right control structure for solving the problem.	**K1**
C117.3	Develop C programs which utilize memory efficiently using programming constructs like pointers.	**K3**
C117.4	Develop, Debug and Execute programs to demonstrate the applications of arrays, functions, basic	**K3**
C117.5	Develop C programs to handle File handling operations.	**K3**
(23A11202A) COMMUNICATIVE ENGLISH LAB		
C118.1	Understand the different aspects of the English language proficiency with emphasis on LSRW skills.	**K2**
C118.2	Apply communication skills through various language learning activities.	**K4**
C118.3	Analyze the English speech sounds, stress, rhythm, intonation and syllable division for better	**K4**
C118.4	Evaluate and exhibit professionalism in participating in debates and group discussions.	**K4**
C118.5	Take part effectively in job interviews.	**K2**
(23A05304A) IT WORKSHOP		
C119.1	Perform Hardware troubleshooting.	**K2**
C119.2	Understand Hardware components and inter dependencies.	**K2**
C119.3	Safeguard computer systems from viruses/worms.	**K3**
C119.4	Document/ Presentation preparation.	**K3**
C119.5	Perform calculations using spreadsheets.	**K2**
(23A11109A) HEALTH AND WELLNESS, YOGA AND SPORTS		
C1110.1	Understand the importance of yoga and sports for Physical fitness and sound health.	**K2**
C1110.2	Demonstrate an understanding of health-related fitness components.	**K3**
C1110.3	Compare and contrast various activities that help enhance their health.	**K4**
C1110.4	Assess current personal fitness levels.	**K2**
C1110.5	Develop Positive Personality.	**K4**
I-II SEM		
(23A11102A) DIFFERENTIAL EQUATIONS & VECTOR CALCULUS		
C121.1	Apply first order and first degree differential equations to model and solve problems in various	**K3**
C121.2	Solve the differential equations related to various engineering fields.	**K3**
C121.3	Identify solution methods for partial differential equations that model physical processes.	**K3**
C121.4	Interpret the physical meaning of different operators such as gradient, curl and divergence.	**K2**
C121.5	Estimate the work done against a field, circulation and flux using vector calculus.	**K4**
(23A11103A) ENGINEERING PHYSICS		
C122.1	Analyze the intensity variation of light due to interference, diffraction & polarization.	**K3**
C122.2	Familiarize with the basics of crystals and their structures.	**K2**
C122.3	Summarize various types of polarization of dielectrics and classify the magnetic materials.	**K3**
C122.4	Explain the basic concepts of quantum mechanics and the band theory of solids.	**K2**
C122.5	Identify the type of semiconductor using Hall effect	**K3**
(23A11104A) CHEMISTRY		
C123.1	Explain the salient features of different theories along with their applications.	**K2**
C123.2	Discuss about the model engineering materials.	**K3**
C123.3	Apply the knowledge of various electrodes for the development of new batteries.	**K3**
C123.4	Identify the different polymers and their uses in various fields of engineering.	**K3**
C123.5	Analyze the knowledge of different analytical techniques used engineering and also development of	**K4**
(23A01301A) BASIC CIVIL AND MECHANICALENGINEERING		
C124.1	Understand various sub-divisions of Civil Engineering and appreciate their role in ensuring better	**K2**
C124.2	Know the concepts of surveying and to understand the measurement of distances, angles and levels	**K3**
C124.3	Realize the importance of Transportation in nation's economy and engineering measures related to	**K3**
C124.4	Understand the importance of water resources and storage structures so that social responsibilities	**K1**
C124.5	Understand the different manufacturing processes and explain the basics of thermal engineering and	**K2**
C124.6	Describe the working of different mechanical power transmission systems and power plants; learn	**K2**

(23A02401A) ELECTRICAL CIRCUIT ANALYSIS – I		
C125.1	Remembering the basic electrical elements and different fundamental laws.	**K3**
C125.2	Understand the network reduction techniques, transformations, concept of self-inductance and	**K2**
C125.3	Apply the concepts to obtain various mathematical and graphical representations.	**K4**
C125.4	Analyze nodal and mesh networks, series and parallel circuits, steady state response, different	**K3**
C125.5	Evaluation of Network theorems, electrical, magnetic and single-phase circuits.	**K2**
(23A11106A) ENGINEERING PHYSICS LAB		
C126.1	Operate optical Instruments like travelling microscope and spectrometer.	**K2**
C126.2	Estimate the wavelengths of different colours using diffraction grating.	**K2**
C126.3	Plot the intensity of the magnetic field of circular coil carrying current with distance	**K3**
C126.4	Calculate the band gap of a given semiconductor.	**K3**
C126.5	Evaluate the acceptance angle and numerical aperture of an optical fiber.	**K3**
(23A11107A) CHEMISTRY LAB		
C127.1	Distinguish different types of titrations in the volumetric analysis	**K3**
C127.2	Determine the cell constant and conductance of solutions	**K3**
C127.3	Calculate the strength of an acid present in secondary batteries	**K3**
C127.4	Analyze the effect of absorbance of given sample solution on concentration by using colorimetry	**K3**
C127.5	Prepare advanced polymer Bakelite materials	**K3**
(23A02402A) ELECTRICAL CIRCUITS LAB		
C128.1	Understand the concepts of network theorems, node and mesh networks, series and parallel	**K2**
C128.2	Apply various theorems to compare practical results obtained with theoretical calculations.	**K4**
C128.3	Determine self, mutual inductances and coefficient of coupling values, parameters of choke coil.	**K4**
C128.4	Analyze different circuit characteristics with the help of fundamental laws and various	**K4**
C128.5	Apply locus diagrams of RL, RC series circuits and examine series and parallel resonance.	**K3**
(23A05303A) ENGINEERING WORKSHOP		
C129.1	Identify workshop tools and their operational capabilities.	**K3**
C129.2	Practice on manufacturing of components using workshop trades including fitting, carpentry,	**K3**
C129.3	Apply fitting operations in various applications.	**K3**
C129.4	Apply basic electrical engineering knowledge for House Wiring Practice	**K3**
(23A11110A) NSS/NCC/SCOUTS & GUIDES/COMMUNITY SERVICE		
C1210.1	Understand the importance of discipline, character and service motto.	**K2**
C1210.2	Solve some societal issues by applying acquired knowledge, facts, and techniques.	**K3**
C1210.3	Explore human relationships by analyzing social problems.	**K4**
C1210.4	Determine to extend their help for the fellow beings and downtrodden people.	**K3**
C1210.5	Develop leadership skills and civic responsibilities.	**K4**

Head of the Department