PARVATHAREDDY BABUL REDDY
VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)
(Affiliated to J.N.T.U.A, Approved by AICTE and Accredited by NAAC)
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CODE	COURSE OUTCOMES	K.Level
	I - I SEM	
C111	**Linear Algebra & Calculus (23A11101A)**	**K.Level**
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 methods such as characteristic polynomials, determinants, and numerical techniques.	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 using Cartesian and polar coordinates and in three dimensions using cylindrical and spherical coordinates.	K3
C112	**Communicative English (23A11201A)**	**K.Level**
C112.1	Understand the context, topic, and pieces of specific information from social or transactional dialogues, and also from reading content.	K2
C112.2	Apply grammatical structures to formulate sentences and correct word forms	K3
C112.3	Analyze discourse markers to speak clearly on a specific topic in informal discussions.	K4
C112.4	Evaluate reading / listening texts and to write summaries based on global comprehension of these texts.	K5
C112.5	Create a coherent paragraph, essay, and resume.	K6
C113	**Basic Electrical & Electronics Engineering (23A02301A)**	**K.Level**
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 and important safety measures related to electrical operations.	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
C114	**Introduction to Programming (23A05301A)**	**K.Level**
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

CODE	COURSE OUTCOMES	K.Level
C115	**Engineering Graphics (23A03301A)**	**K.Level**
C115.1	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections.	K2
C115.2	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.	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
C116	**Electrical and Electronics Engineering Workshop (23A02302A)**	**K.Level**
C116.1	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.	K2
C116.2	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.	K4
C116.3	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.	K3
C116.4	Identify & testing of various electronic components along with characteristics of various electron devices.	K2
C116.5	Explain the operation of a digital circuit.	K2
C117	**Computer Programming Lab (23A05302A)**	**K.Level**
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 concepts of pointers in C.	K3
C117.5	Develop C programs to handle File handling operations.	K3
C118	**Communicative English Lab (23A11202A)**	**K.Level**
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.	K3
C118.3	Analyze the English speech sounds, stress, rhythm, intonation and syllable division for better listening and speaking comprehension.	K4
C118.4	Evaluate and exhibit professionalism in participating in debates and group discussions.	K5
C118.5	Take part effectively in job interviews.	K5
C119	**IT Workshop (23A05304A)**	**K.Level**
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

CODE	COURSE OUTCOMES	K.Level
C1110	**Health and Wellness, Yoga and Sports (23A11109A)**	**K.Level**
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.	K5
	I - II SEM	
C121	**Differential Equations & Vector Calculus (23A11102A)**	**K.Level**
C121.1	Apply first order and first degree differential equations to model and solve problems in various scientific and engineering disciplines, including electrical circuits	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
C122	**Engineering Physics (23A11103A)**	**K.Level**
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
C123	**Chemistry (23A11104A)**	**K.Level**
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 new techniques.	K4
C124	**Basic Civil and Mechanical Engineering (23A01301A)**	**K.Level**
C124.1	Understand various sub-divisions of Civil Engineering and appreciate their role in ensuring better society.	K2
C124.2	Know the concepts of surveying and to understand the measurement of distances, angles and levels through surveying.	K3
C124.3	Realize the importance of Transportation in nation's economy and engineering measures related to highways in terms of geometrics.	K3
C124.4	Understand the importance of water resources and storage structures so that social responsibilities of water conservation will be appreciated	K1
C124.5	Understand the different manufacturing processes and explain the basics of thermal engineering and its applications	K2
C124.6	Describe the working of different mechanical power transmission systems and power plants; learn basics of robotics.	K2

CODE	COURSE OUTCOMES	K.Level
C125	**Network Analysis (23A04401A)**	**K.Level**
C125.1	Describe the working of different mechanical power transmission systems and power plants; learn basics of robotics.	K2
C125.2	Analyze the circuit using network simplification theorems.	K4
C125.3	Find Transient response and Steady state response of a network	K3
C125.4	Analyze electrical networks in the Laplace domain.	K4
C125.5	Compute the parameters of a two-port network.	K3
C126	**Engineering Physics Lab (23A11106A)**	**K.Level**
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 distan	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
C127	**Chemistry Lab (23A11107A)**	**K.Level**
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 batteri	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
C128	**Network Analysis & Simulation Lab (23A04402A)**	**K.Level**
C128.1	Verify Kirchhoff's laws and network theorems.	K3
C128.2	Measure time constants of RL & RC circuits.	K3
C128.3	Analyze behavior of RLC circuit for different cases.	K4
C128.4	Design resonant circuit for given specifications.	K5
C128.5	Characterize and model the network in terms of all network parameters.	K6
C129	**Engineering Workshop (23A05303A)**	**K.Level**
C129.1	Identify workshop tools and their operational capabilities	K3
C129.2	Practice on manufacturing of components using workshop trades including fitting, carpentry, foundry, welding and plumbing.	K3
C129.3	Apply fitting operations in various applications.	K3
C129.4	Apply basic electrical engineering knowledge for House Wiring Practice	K3

CODE	COURSE OUTCOMES	K.Level
C1210	**NSS/NCC/Scouts & Guides/Community Service (23A11110A)**	**K.Level**
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 down trodden people.	K3
C1210.5	Develop leadership skills and civic responsibilities.	K5