AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Recg. By Govt. of T.S & Affiliated to JNTUH, Hyderabad)
NAAC "B++" Accredited Institute
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HUMANITIES & SCIENCE I & II SEM Course Outcomes For the A.Y 2022-23

S.no	Year/Sem	Course Name	Course Outcomes
1	I-I	MATRICES & CALCULUS	CO1 :Write the matrix representation of a set of linear equations and to analyse the solution of the system of equations
			CO2: Find the Eigenvalues and Eigen vectors
			CO3: Reduce the quadratic form to canonical form using orthogonal transformations
			CO4: Solve the applications on the mean value theorems
			CO5: Evaluate the improper integrals using Beta and Gamma functions
2	I-I	ENGINEERING CHEMISTRY	CO1: Students will acquire the basic knowledge of electrochemical procedures related to corrosion and its control
			C02: The students are able to understand the basic properties of water and its usage in domestic and industrial purposes
			CO3: They can learn the fundamentals and general properties of polymers and other engineering materials.
			CO4: They can predict potential applications of chemistry and practical utility in order to become good engineers and entrepreneurs
3	I-I	PROGRAMMING FOR PROBLEM SOLVING	**CO1:** To write algorithms and to draw flowcharts for solving problems
			CO2: To convert the algorithms/flowcharts to C programs
			CO3: To code and test a given logic in the C programming language
			CO4: To decompose a problem into functions and to develop modular reusable code
			CO5: To use arrays, pointers, strings and structures to write C programs
			CO6: Searching and sorting problems

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4	I-I	BASIC ELECTRICAL ENGINEERING	CO1: Understand and analyze basic Electrical circuits
			CO2: Study the working principles of Electrical Machines and Transformers
			CO3: Introduce components of Low Voltage Electrical Installations
5	I-I	COMPUTER AIDED ENGINEERING GRAPHICS	CO1: Apply computer aided drafting tools to create 2D and 3D objects
			CO2: sketch conics and different types of solids
			CO3: Appreciate the need of Sectional views of solids and Development of surfaces of solids
			CO4: Read and interpret engineering drawings
			CO5: Conversion of orthographic projection into isometric view and vice versa manually and by using computer aided drafting
6	I-I	ENGINEERING CHEMISTRY LABORATORY	CO1: Determination of parameters like hardness of water and rate of corrosion of mild steel in various conditions
			CO2: Able to perform methods such as conductometry, potentiometry and pH metry in order to find out the concentrations or equivalence points of acids and bases
			CO3: Students are able to prepare polymers like bakelite and nylon-6
			CO4: Estimations saponification value, surface tension and viscosity of lubricant oils
7	I-I	PROGRAMMING FOR PROBLEM SOLVING LABORATORY	CO1: formulate the algorithms for simple problems
			CO2: translate given algorithms to a working and correct program
			CO3: correct syntax errors as reported by the compilers
			CO4: identify and correct logical errors encountered during execution
			CO5: represent and manipulate data with arrays, strings and structures

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8	I-I	BASIC ELECTRICAL ENGINEERING LABORATORY	CO1: Verify the basic Electrical circuits through different experiments.
			CO2: Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods
			CO3: Analyze the transient responses of R, L and C circuits for different input conditions
9	I-II	ORDINARY DIFFERENTIAL EQUATIONS AND VECTOR CALCULUS	CO1: Identify whether the given differential equation of first order is exact or not
			CO2: Solve higher differential equation and apply the concept of differential equation to real world problems
			CO3: Use the Laplace transforms techniques for solving ODE's.
			CO4: Evaluate the line, surface and volume integrals and converting them from one to another
10	I-II	APPLIED PHYSICS	CO1: Understand physical world from fundamental point of view by the concepts of Quantum mechanics and visualize the difference between conductor, semiconductor, and an insulator by classification of solids
			CO2: Identify the role of semiconductor devices in science and engineering Applications
			CO3: Explore the fundamental properties of dielectric, magnetic materials and energy for their applications
			CO4: Appreciate the features and applications of Nanomaterial's
			CO5: Understand various aspects of Lasers and Optical fiber and their applications in diverse fields.
11	I-II	ENGINEERING WORKSHOP	CO1: Study and practice on machine tools and their operations
			CO2: Practice on manufacturing of components using workshop trades including pluming, fitting, carpentry, foundry, house wiring and welding
			CO3: Identify and apply suitable tools for different trades of Engineering processes including drilling, material removing, measuring, chiseling
			CO4: Apply basic electrical engineering knowledge for house wiring practice.

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12	I-II	ENGLISH FOR SKILL ENHANCEMENT	CO1: Understand the importance of vocabulary and sentence structures
			CO2: Choose appropriate vocabulary and sentence structures for their oral and written communication
			CO3: Demonstrate their understanding of the rules of functional grammar
			CO4: Develop comprehension skills from the known and unknown passages
			CO5: Acquire basic proficiency in reading and writing modules of English
13	I-II	ELECTRONIC DEVICES AND CIRCUITS	CO1: Acquire the knowledge of various electronic devices and their use on real life.
			CO2: Know the applications of various devices.
			CO3: Acquire the knowledge about the role of special purpose devices and their applications.
14	I-II	APPLIED PHYSICS LABORATORY	**CO1**: Know the determination of the Planck's constant using Photo electric effect and identify the material whether it is n-type or p-type by Hall experiment
			CO2: Appreciate quantum physics in semiconductor devices and optoelectronics.
			CO3: Gain the knowledge of applications of dielectric constant.
			CO4: Understand the variation of magnetic field and behavior of hysteresis curve.
			CO5: Carried out data analysis
15	I-II	PYTHON PROGRAMMING LABORATORY	CO1: Develop the application specific codes using python.
			CO2: Understand Strings, Lists, Tuples and Dictionaries in Python
			CO3: Verify programs using modular approach, file I/O, Python standard library
			CO4: Implement Digital Systems using Python

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16	I-II	ENGLISH LANGUAGE AND COMMUNICATION SKILLS LABORATORY	CO1: Understand the nuances of English language through audio- visual experience and group activities
			CO2: Neutralise their accent for intelligibility
			CO3: Speak with clarity and confidence which in turn enhances their employability skills
17	I-II	IT WORKSHOP	CO1: Perform Hardware troubleshooting
			CO2: Understand Hardware components and inter dependencies
			CO3: Safeguard computer systems from viruses/worms
			CO4: Document/ Presentation preparation
			CO5: Perform calculations using spreadsheets

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