



K.D.K.COLLEGE OF ENGINEERING, NAGPUR

Department of Basic Science and Humanities (First Year)

COURSE OUTCOMES

B.TECH. FIRST SEMESTER (CBCS)

BRANCH – CSE/AIDS/IT ENGINEERING

1BCS01T/IBAD01T/1BIT01T Applied Mathematics – I	
CO1	Apply the concepts of matrix operations, inversion.
CO2	Determine Partial derivative of various functions and apply their concepts to Engineering problems.
CO3	Apply the concepts of Beta and Gamma functions to solve the problems.
CO4	Solve ordinary differential equations using elementary techniques and apply it to formulate mathematical models.
CO5	Use higher order differential equations to solve the problems in engineering field.
1BCS02T/IBAD02T/1BIT02T Applied Chemistry	
CO1	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications
CO2	Explain basic principles of spectroscopy and its applications.
CO3	Identify the types of fuels and Apply concepts of electrochemistry for energy storage devices.
CO4	Develop an insight into concepts of Green Chemistry, e-waste management and advanced materials.
1BCS02P/IBAD02P/1BIT02P Applied Chemistry Lab	

CO1	Estimate the soluble impurities present in the given water sample.
CO2	Analyze a broad foundation in energy and environment that stresses scientific reasoning and analytical problem solving.
CO3	Point out & operate the different instruments used in chemistry laboratory.
1BIK01T-A Indian Knowledge System	
CO1	Understand the diverse dimensions of Indian knowledge traditions.
CO2	Analyze the contributions of ancient Indian scholars to different fields of knowledge.
CO3	Explore the interconnectedness of various branches of Indian knowledge.
CO4	Critically evaluate the relevance of Indian knowledge systems in modern society.
1BCC01P-F Basics of Vedic Maths	
CO1	Compute simple arithmetic calculations with speed and accuracy.
CO2	Generate tables of any number
CO3	Solve products of large numbers quickly
CO4	Solve difficult calculations like square roots and cube roots of integers speedily.

BRANCH – CIVIL/ETC/MECHANICAL/ELECTRICAL ENGINEERING

1BCV01T/1BET01T/1BME01T/1BEE01T Applied Mathematics – I	
CO1	Apply the concepts of matrix operations, inversion.
CO2	Determine Partial derivative of various functions and apply their concepts to Engineering problems.
CO3	Apply the concepts of Beta and Gamma functions to solve the problems.
CO4	Solve ordinary differential equations using elementary techniques and apply it to formulate mathematical models.
CO5	Use higher order differential equations to solve the problems in engineering field.
1BCV02T/1BET02T/1BME02T/1BEE02T Applied Physics	
CO1	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.
CO2	Identify the types of fuels and explain working of I.C. engines.
CO3	Apply concepts of electrochemistry for energy storage devices and corrosion.
CO4	Identify and describe different types of advanced engineering materials.
1BCV02P/1BET02P/1BME02P/1BEE02P Applied Physics Lab	
CO1	Create the basic circuitries in Electronics. Demonstrate and illustrate the basic principles of operation of semiconductor diodes and transistors.

CO2	Differentiate between the types of semiconductors through band gap experiment. Analyze the magnetic field-based experiment to distinguish the materials.
CO3	Apply the concept of diffraction for the optical based devices using LASER beam. Develop the concept of fiber optic cables to determine the numerical aperture of the fiber cables and to get acquainted with its use in daily life.
CO4	Examine the various electrical and electronics-based parameters viz. A.C. Voltage, frequency, and phase shift and time period using CRO.
CO5	Practice effectively as an individual and as a member of a team.
1BAEO1T-A Professional Communication	
CO1	To develop basic communication and grammar usage
CO2	To orient students in formal written communication.
CO3	To develop effective Listening Skill.
CO4	To provide practice and improve students' oral communication skills.
1BCC01P-A Yoga	
CO1	Illustrate the fundamental techniques, underlying principles, and standard practices of both sports and yoga.
CO2	Collect practical experience in applying the principles of general and targeted physical conditioning exercises and yoga.

CO3	Enhance health-related fitness levels and achieve harmony between body and mind through participation in a variety of fitness activities, sports, recreational games, and yoga.
CO4	Practice Healthy & active living with reducing Sedentary Lifestyle.