

# VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

## Department of Humanities & Sciences

(CSE,AI,AI&DS,CSE(DS),CSE(AI&ML))

### I Year I Semester – R22

#### Course outcomes

**Course Name: Mathematics-I/ A221001**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Write the matrix representation of system of linear equations and identify the consistency of the system of equations.
CO 2	Find the Eigen values and Eigen vectors of the matrix and discuss the nature of the quadratic form.
CO 3	Analyze the convergence of sequence and series.
CO 4	Discuss the applications of mean value theorems to the mathematical problems, Evaluation of improper integrals using Beta and Gamma functions.
CO 5	Examine the extrima of functions of two variables with/ without constraints.

**Course Name: Engineering Chemistry/ A221004**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Understand the basic properties of water and its usage in domestic and industrial purposes.
CO 2	Acquire the basic knowledge of electrochemical procedures related to corrosion and its control.

CO 3	Learn the fundamentals and general properties of polymers and other engineering materials.
CO 4	Acquire knowledge of various energy sources.
CO 5	Apply the knowledge of engineering materials in daily life.

**Course Name: Engineering Chemistry Lab/ A221083**

<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
CO 1	Determination of parameters like hardness and chloride content of water.
CO 2	Determination of rate of corrosion of mild steel in various conditions.
CO 3	To perform methods such as conductometry, potentiometry and pH metry in order to find out the concentrations or equivalence points of acids and bases.
CO 4	To prepare polymers like Thiokol and Nylon-6.
CO 5	Estimation of Saponification value, Viscosity and surface tension of lubricant oils.

**Course Name: Basic Electrical Engineering/A221202**

<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
CO 1	Understand basic principles of electrical elements.
CO 2	Apply the concepts of AC circuits to various elements and combinations.

CO 3	Examine principle and tests of transformer.
CO 4	Contrast the working of DC machines and induction motors.
CO 5	Asses working principle of AC Generator and electrical installations.

**Course Name: Basic Electrical Engineering Lab / A221281**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Understand basic electrical laws.
CO 2	Analyze the response of different types of electrical circuits to different excitations.
CO 3	Apply electric laws and find out performance of various electrical machines.
CO 4	Assess the losses in electrical machines.
CO 5	Evaluate the performance of electrical circuits and electrical machines.

**Course Name: Engineering Graphics & Modelling /A221302**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Comprehend the concepts of engineering drawing and CAD software.
CO 2	Conceptualize and draw the projections of points and straight lines
CO 3	Visualize and project different views of a planes and solids.
CO 4	Evaluate the surfaces of solids developed for further processing in the engineering applications.

CO 5	Generate isometric and corresponding orthographic views of any given component.
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Course Name: **Programming for Problem Solving / A221502**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Write algorithms and to draw flowcharts for solving problems.
CO 2	CO2: To understand the usage of control statements, arrays and strings.
CO 3	CO3: Develop programs with user defined data types and pointers.
CO 4	CO4: To decompose a problem into functions and to develop modular reusable code.
CO 5	CO5: Analyze various Searching and sorting problems.

Course Name: **Programming for Problem Solving Lab / A221582**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Apply the syntax rules for numerical constants ,variables and data types.
CO 2	Design programs on control statements, Arrays and Strings.
CO 3	Develop applications on user defined data types.
CO 4	Develop programs on code reusability using functions.
CO 4	Implement various searching and sorting techniques using arrays.

**Course Name: Elements of Computer Science & Engineering / A221503**

<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO 1</b>	Know the working principles of functional units of a basic Computer
<b>CO 2</b>	Understand program development, the use of data structures and algorithms in problem solving.
<b>CO 3</b>	Know the need and types of operating system, database systems.
<b>CO 4</b>	Understand the significance of networks, internet, WWW and cyber security
<b>CO 5</b>	Understand Autonomous systems, the application of artificial intelligence.

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PRINCIPAL