

**VIDYA JYOTHI INSTITUTE OF TECHNOLOGY**  
*Department of Humanities & Sciences (ME&CE)*  
**I Year I Semester – R20**  
**Course outcomes**

<b>Mathematics-I/ A41002</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Write the matrix representation of system of linear equations and identify the consistency of the system of equations.
<b>CO2</b>	Find the Eigen values and Eigen vectors of the matrix and discuss the nature of the quadratic form.
<b>CO3</b>	Analyze the convergence of sequence and series.
<b>CO4</b>	Discuss the applications of mean value theorems to the mathematical problems, Evaluation of improper integrals using Beta and Gamma functions.
<b>CO5</b>	Examine the extrima of functions of two variables with/ without constraints.

<b>EngineeringPhysics/ A41003</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Explain the crystal structure of solids
<b>CO2</b>	Understand various optical phenomena of matter
<b>CO3</b>	Explain the working principle of optical fibers and lasers
<b>CO4</b>	Interpret forced damped harmonic oscillations
<b>CO5</b>	Apply the knowledge of magnetic behavior of materials

<b>Physics Lab/ A41082</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Apply optical phenomena to characterize optical sources and components.
<b>CO2</b>	Characterize semiconductors and semiconductor devices.
<b>CO3</b>	Study transient response of RC circuit.
<b>CO4</b>	Study the properties and resonance mechanisms in mechanical and electrical systems.

<b>CO5</b>	Evaluate the magnetic Induction along the axis of current carrying coil.
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<b>English/ A41001</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Infer the importance of scientific discoveries in promoting social responsibilities.
<b>CO2</b>	Comprehend the given texts and respond appropriately for technical and professional purposes.
<b>CO3</b>	Communicate confidently and transfer information into various forms of writing.
<b>CO4</b>	Understand the importance of health and nutrition for a better society.
<b>CO5</b>	Present various forms of business writing skills for successful careers.

<b>English Language Skills Lab / A41081</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Reproduce speech sounds and improve fluency in language.
<b>CO2</b>	Understand syllables and consonant clusters for appropriate pronunciation.
<b>CO3</b>	Exhibit effective professional skills with rhetoric eloquence.
<b>CO4</b>	Deliver enthusiastic and well-practiced presentation.
<b>CO5</b>	Learn Task-Based Language Learning (TBLL) through various language learning activities effectively.

<b>Programming for Problem Solving-I/ A41501</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Design Algorithms and Flowcharts for real world applications using 'C'.
<b>CO2</b>	Know the usage of various operators in Program development.
<b>CO3</b>	Design programs involving decision and iteration structures.
<b>CO4</b>	Apply the concepts code reusability using Functions.
<b>CO5</b>	Analyze various searching and sorting techniques using Arrays.

<b>Programming for Problem Solving Lab-I/ A41581</b>	
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<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Apply the specification of syntax rules for numerical constants and variables, data types.
<b>CO2</b>	Know the Usage of various operators and other C constructs.
<b>CO3</b>	Design programs on decision and control constructs.
<b>CO4</b>	Develop programs on code reusability using functions.
<b>CO5</b>	Implement various searching and sorting techniques using arrays.

<b>Engineering Graphics &amp; Modeling/ A41301</b>	
<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
<b>CO1</b>	Understand the concepts of engineering drawing of planes, solids and the CAD drawing software.
<b>CO2</b>	Applying the principles of engineering graphics while drawing the engineering components.
<b>CO3</b>	Analyse the sectional views for their configurations.
<b>CO4</b>	Evaluate the surfaces of solids developed for further processing in the engineering applications.