

# Vidya Jyothi Institute of Technology

*Department of Humanities & Sciences (CE)*

**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 extrema of functions of two variables with/ without constraints.

**Course Name: Applied Physics/ A221002**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Understand various optical phenomena of light.
CO 2	Apply the basic principles of quantum mechanics to classify solids based on the band theory.
CO 3	Elucidate the characteristics of semi conductors and semi conductor devices .
CO 4	Apply the knowledge of nanotechnology for societal applications.

CO 5	Explain the working principle of lasers and optical fibers.
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Course Name: **Applied Physics Lab/ A221081**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Apply optical phenomena to characterize optical sources and components.
CO 2	Characterize semiconductors and semiconductor devices.
CO 3	Study transient response of RC circuit and resonance mechanisms in mechanical and electrical systems.
CO 4	Collect data and evaluate the outcomes of an experiment quantitatively and qualitatively.
CO 5	Carryout experimental data analysis.

Course Name: **English for Skill Enhancement / A221003**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Understand the importance of vocabulary and sentence structures.
CO 2	Choose appropriate vocabulary and sentence structures for oral and written communication.
CO 3	Demonstrate understanding of the rules of functional grammar.
CO 4	Develop comprehension skills from the known and unknown passages through effective reading strategies.
CO 5	Construct paragraphs, letters, essays, abstracts, précis and reports in various contexts thereby improving proficiency in writing modules of English.

Course Name: **English Language & Communication Skills Lab / A221082**

After completing this course the student must demonstrate the knowledge and ability to	
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CO 1	Reproduce speech sounds and improve language
CO 2	Develop accent and pronunciation in various situations
CO 3	Understand variants in pronunciation by differentiating between British and American accents
CO 4	Identify the diverse purposes of listening and speaking
CO 5	Exhibit critical thinking, problem-solving and decision-making skills through Group Discussions

Course Name: **C Programming for Engineers / A221501**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Design Algorithms and Flowcharts for real world applications.
CO 2	Know various operators and decision statements for program development.
CO 3	Design programs involving iteration statements and code reusability using Functions.
CO 4	Develop programs using arrays and identify various string handling functions.
CO 5	Analyse various searching and sorting techniques.

Course Name: **C Programming for Engineers Lab / A221581**

After completing this course the student must demonstrate the knowledge and ability to	
CO 1	Apply the specification of syntax rules for numerical constants, variables and data types.
CO 2	Know the usage of various operators and design programs on decision Statements.
CO 3	Design programs on loop control statements, pointers and code reusability using functions.

CO 4	Develop programs on array and strings.
CO 5	Implement programs on structures and various searching and sorting techniques.

**Course Name: Elements of Civil Engineering / A221101**

<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
CO 1	Identify the various rocks, minerals depending on geological classifications
CO 2	Identify Bricks and tiles suitable for Construction Practices
CO 3	Understand soils classifications and its strength Parameters
CO 4	Evaluate the soils and its suitability for construction
CO 5	Evaluate the properties of cement, fine and coarse aggregates and determine its suitability for

**Course Name: Engineering Workshop / A221381**

<b>After completing this course the student must demonstrate the knowledge and ability to</b>	
CO 1	Understanding the tools and methods of using to fabricate engineering Components.
CO 2	Applying the measuring techniques to verify the dimensional accuracy.
CO 3	Evaluating various methods and trades of workshop in the component building.

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