

# I Year I Semester

## COURSE OUTCOMES – CIVIL ENGINEERING

### MATHEMATICS-I

**CO 1:-** write the matrix representation of a set of linear equations and to analyze the solution of the system of equations

**CO 2:-** find the Eigen values and Eigen vectors which come across under linear transformations

**CO 3:-** find the extreme values of functions of two variables with/ without constraints. •

**CO 4:-** Identify whether the given first order DE is exact or not •

**CO 5:-** solve higher order DE's and apply them for solving some real world problems

### MATHEMATICS – II

**CO 1:-** use Laplace transform techniques for solving DE's

**CO 2:-** Evaluate integrals using Beta and Gamma functions

**CO 3:-** evaluate the multiple integrals and can apply these concepts to find areas, volumes, moment of inertia etc of regions o

**CO 4:-** evaluate the line, surface and volume integrals and converting them from one to another

### ENGINEERING PHYSICS - I

**CO 1:-** Learn principle, working of various laser systems and light propagation

**CO 2:-** Learn principle, working of various laser systems and light propagation through optical fibers.

**CO 3:-** Distinguish various crystal systems and understand atomic packing factor.

**CO 4:-** Know the various defects in crystals.

**CO 1:-** Demonstrate the basic knowledge of computer hardware and software.

**CO 2:-** Ability to write algorithms for solving problems.

**CO 3:-** Ability to draw flowcharts for solving problems.

**CO 4:-** Ability to code a given logic in C programming language.

**CO 5:-** Gain knowledge in using C language for solving problems.

### **ENGINEERING GRAPHICS**

**CO 1:-** Ability to prepare working drawings to communicate the ideas and information.

**CO 2:-** Ability to read, understand and interpret engineering drawings.

### **COMPUTER PROGRAMING IN C LAB**

**CO1:-** Ability to design and test programs to solve mathematical and scientific problems.

**CO2:-** Ability to write structured programs using control structures and functions.