# 10 ME 42 P    CAD & MATLAB   LABORATORY

## IV B.Tech II Semester

*(with effect from the academic year 2013-2014)*

*Periods/week: 3 Hrs.*                                              *Credits: 2*
*University Exam:3 Hrs*                                  *Sessional Marks:   40*
                                                    *End Examination Marks: 60*

*(Any **Eight** or more  of the following experiments will be given)*

**List of Exercises:**

1. Introduction to ANSYS, AIP & C-Graphics
2. Finite Element Analysis of a Simply supported beam using ANSYS
3. One dimensional heat transfer analysis of a Composite wall using ANSYS
4. Finite Element Analysis of a bi metallic rod using ANSYS
5. Design and drafting of Helical Compression Spring using AIP Software
6. Preparation of solid models for the given sketches  using AIP Software
7. Generation of Isometric Views using AUTO CAD
8. Generation of sectional front and top views of a Knuckle Joint using AUTO CAD
9. Write a Program for generating a Straight Line
10. Write a Program for generating a Circle
11. Write a Program for Straight Line Transformations
12. Write a Program for Circle Transformations
13. Write a Program for Circle Boolean Operations
14. Introduction to MAT LAB
15. Matrix Operations (Determinant, Multiplication, Inverse, Transpose)
16. Deletion and addition of an element in an array.
17. Searching an element in the matrix
18. Factorial of Number.
19. GCD of two numbers
20. Ncr calculations
21. Reversing order of numbers.
22. Sum of Geometric series.
23. Fibonacci series
24. Derivative of a Polynomial.
25. Computation of various functions  ( $e^x$ . sin $x^2$,  $x^2+2x+3$)
26. Roots of a quadratic equation.
27. Drawing a circle.
28. types of plots.   (Line, bar, stem, Stairs)
29. Curve fitting (1+1)
30. One and two demesional interpolation (1+1)

**P. T. O.**

31. Plotting of multiple curves.

32. Binomial distribution.

33. Normal distribution

34. Gauss sidal method for solving equation.

35. Newton Raphson method.

36. Solving two linear Equations.

37. Minimum and maximum of given numbers

38. Sorting the given numbers in accending and desccending orders

39. Biggest and smallest of numbers