Department: APPLIED PHYSICS
Course: INTRODUCTION TO COMPUTING

LIST OF EXPERIMENTS (LAB COMPONENT)

1. **Basics of Matrix operation and Matrix manipulation**

2. **Write Matlab program for very famous Blackbody radiation and verify Wein's displacement law.**

3. **Write Matlab program to show the binding energy/mass number with mass number to find the most stable state.**

4. **Write Matlab program to calculate the values of inbuilt defined trigonometric functions using series solution approach. Compare the results with inbuilt functions.**

5. **Write Matlab program to study of the behavior of Gaussian function using all appropriate inbuilt 2*d* and 3*d* plotting commands.**

6. **Write Matlab program to find out the unknown coefficients by Polynomial fitting.**

7. **Write Matlab program to solve the second order differential equation of the pendulum problem.**

8. **Write Matlab code to plot the intensity distribution of Single-slit, double slit and N-slit all together. Analyze the result. Show how young's double slit experiment is different from the double slit diffraction.**

9. **Write Matlab program to find out the roots of a given equation using bisection method. Compare the results using Matlab inbuilt functions.**

10. **Write Matlab code to show the propagation of group wave as a function of time.**