Formal Lab Reports

ENGR 305 Lab

Page 1: **COVER SHEET**, including title, name, date, section, etc.

Pages 2-?:   **TITLE**

Objective: A clear, concise statement of the goals of the laboratory exercise. What principles and/or properties were to be demonstrated or measured? This could be as short as one or two sentences.

Theory: Define the principles and/or properties that are being studied, and explain how they are related to each other. (This may include a diagram or a figure.) This section might not present any information about the particular experiment you are performing. Any general or fundamental equations should be presented here. Ensure that you clearly cite all sources using a standard format.

Experimental method and reasoning: Describe what measurements were performed, how they were performed, what equipment is used, and why these particular measurements were performed (i.e. how are these measurements used to study the parameters of interest? What equations are used to analyze the data?).

Results and Conclusions (Discussion): Present the results. This may be in the form of graphs or tables. Also show your calculations in this section, based on the equations given in the theory section. In your discussion, compare to theory. What are your conclusions about the results and the experiment? Do not just describe what the results/plots show; explain the observed trends using appropriate theories you have learned. If theory and experiment do not yield good agreement, propose well-justified reasons for the discrepancy.

Bibliography: List of all the references cited in the order in which they were cited, or in alphabetical order of the first author's last name.

Reports must be prepared using a computer and the word processing software of your choice. Equations may be generated using Equation Editor, which is a Microsoft word plug-in. All figures can either be reproduced from the handouts and all graphs/plots must be generated using a software of your choice e.g. Excel, Matlab, etc. **A well-written report does not necessarily need to be lengthy.**