

ROCHESTER INSTITUTE OF TECHNOLOGY
MICROELECTRONIC ENGINEERING

LABORATORY Report Guidelines and Evaluation

Each formal laboratory report should follow style format as per IEEE or SPIE (see links on class [webpage](#)). Reports will be evaluated according to the percentage points attached to the indicated sections below:

ABSTRACT (10%) – In this section include: (a) a statement of the goal and objective of the experiment, and (b) a statement summarizing the approach, the results, and the conclusions. The summary should be brief and allow the reader to easily determine the scope of the report.

INTRODUCTION (10%) – This is expected to be a general statement leading the reader into the main technical portions of the report. It should state the importance of the topic (goal), and the significance or usefulness of the methods (objective). It is intended to bring the reader up to the point where the report starts. It can, for example, include historical notes of interest. It is not necessary to have it highly technical, but it should smoothly lead into the next section.

THEORY (20%) – Include all pertinent background principles in this section. State theories and assumptions; cite literature as appropriate. Theories, equations, previous data or experience are important. Assume that the reader is reasonably knowledgeable in science and engineering. Do not include irrelevant theories.

EXPERIMENTAL PROCEDURE (15%) – A description of the experimental plan should include a clear statement of the objective as it relates to the goal. Also include the reasoning behind the experimental design chosen. A technically competent reader should be able to duplicate your experiment. Clarify the procedures by using an outline, flowchart, or numbered lists. If excessive detail is needed to explain processing steps it should be attached as an appendix.

RESULTS and ANALYSIS (20%) - This section should include information on how the raw data was reduced for analysis. Only data or other results which are organized and/or summarized, such as in tables or graphs should be presented here. The raw data can be attached as an appendix. This section should also include a comprehensive analysis of the results.

CONCLUSIONS (15%) – This is a brief statement, probably 1-3 paragraphs in total. It is essentially a summary of the findings from the results and analysis of the previous section.

REFERENCES (portion of Professionalism 10%) - References should be formatted as per the report style being used, IEEE or SPIE. Each should contain author, title, publisher, date, and any other information needed to find resource.

The report may be enhanced by the inclusion of various optional sections, such as:

- Appendix

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- Data Sheets and Sample Calculations
- Detailed Procedures
- Acknowledgements

The final ten percentage points will apply to “Professionalism”. This includes neatness, grammar, spelling, organization, and formatting of the report and references. Before you hand in your report for evaluation, ask yourself if you would be proud to have your report circulated around the company where you are employed, to be read by your supervisors and peers.

For other useful references for technical report writing see links on class [webpage](#).