

Lab Report Rubric

I recommend that you use this rubric together with the [How to write a lab report guide](#) as a checklist before submission.

This rubric is also found as a rubric on Canvas.

Table 1: ISAT 300 Lab Report Rubric

Cover Page (2.5 points total)

- Is there a separate Title Page?
 - Does the title page for the lab have an explanatory title (not “Lab x”)?
 - Are all of the authors listed?
 - Is the date included?
 - Is the Honor Code Pledge included?
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Abstract (5 points total)

- Is the abstract a single paragraph on its own page?
 - Is there a brief introductory statement?
 - Is the purpose of the lab expressed as it relates to all of the experiments?
 - Is the stated purpose of the lab correct and complete?
 - Are experimental approaches summarized?
 - Is the summary of approaches correct, complete, and readily understood?
 - Briefly state the results of each of the experiments (including numerical results where appropriate)
 - Is the summary of results correct, complete, and readily understood?
 - Briefly state the conclusion of the experiments and note important observations where appropriate
 - Is the conclusion sensible and useful in summarizing the value of the work?
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Introduction (10 points total)

- State the purpose of the lab in a real-world context
 - Provide relevant background information from the lectures and literature to support the real-world context
 - Provide references for the relevant background information
 - Relate the lab experiment related to the relevant background information
 - Present a specific problem, hypothesis, or research question for the lab
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Methods and Materials (10 points)

- Is there an introductory paragraph that reiterates the purpose of the investigation?
- Are the methods organized and grouped together for each experiment?
- For each experiment, is there a statement of the intended purpose or hypothesis being tested?

Methods and Materials (10 points)

Is this section written in the 3rd person, past tense?

Are full sentences used to describe the methods?

Are the methods easy to understand? i.e. - could a non-science major repeat the experiment?

Are figures or pictures presented to illustrate more complex scenarios?

(if applicable) Do the figures (if applicable) include appropriate figure legends?

(if applicable) Are the figures discussed in the text?

Are references to the Lab Manual or other outside sources presented appropriately?

Results (20 points total)

Is there an introductory statement that reiterates the purpose of the investigation?

Is the data organized and presented clearly?

Are tables and graphs used to present the data appropriately?

Are there descriptive figure legends for tables and graphs that tell the reader what they should observe?

Are tables, figures, and graphs described appropriately in the main body of the text?

Are the readers referred to look at the figures, graphs, and tables?

Is the uncertainty of the measurement presented (i.e. error bars, mean +/- standard deviation, etc.)?

Are the number of trials indicated?

Discussion (20 points total)

Is there an introductory statement that reiterates the purpose of the investigation?

Is an analysis of the results presented for each experiment?

Were the results and analysis of each experiment kept in the same order for easy cross reference?

Does your discussion address the guiding questions: - What do the results indicate about the system we study? -

Discuss the uncertainty of the results (including statistical significance if applicable) - What is the importance of the results?

Was the analysis appropriate - did we do the right analysis?

Is the discussion logical? Does the analysis make sense?

Conclusion (10 points total)

Did we discuss conclusions reached for each of the experiments?

Are these conclusions supported by the experimental results?

Did we respond to / assess our research question/ hypotheses in light of the results and analysis?

Did we put this lab and its results in the context of the bigger picture of measurement theory and suggest future experiments if appropriate?

References (2.5 points total)

Are references numbered sequentially throughout the entire text starting with 1,2,3, etc...

Are references formatted correctly?

is a "date accessed" provided for website references?

Professional Appearance/Spelling/Grammar/Punctuation/References (5 points total)

Does the report have a consistent and professional formatting with minimal errors

Professional Appearance/Spelling/Grammar/Punctuation/References (5 points total)

Was the text of this report written in a clear manner, readily understood?

Does it appear as a single coherent document (not three separate files cobbled together)

Incorporation of past feedback (15 points total)

A paragraph on how you used the previous feedback is included

Previously commented on shortcomings are not repeated
