

Tips for writing an Abstract (Studio 02 and Studio 20)

- If you were writing a full lab report, the Abstract would be a short statement of the experiment and a statement of the results and uncertainty.
- The word limit for the Abstract is 250 words. Please use a word count function in your favorite text editor to check this limit before submission. You will not be graded on the exact word count if your abstract is near 250 words; however, this value is considered a typical upper limit and should be more than sufficient to write an abstract, with room to spare. If you are anxious about your abstract coming in at over 250 words because of symbols and numbers and decimal points, it is almost surely too long.
- A separate cover page is not necessary; however, we must be able to identify you, so your Abstract does need the equivalent of the cover page info (the cover page would normally be part of a full lab report, and in such a full lab report you would merely have a heading labelled "Abstract"). In this situation, you can just title your abstract as "Abstract for Studio ##" or something similar, and your name and group and studio section and date just below it. At the word limit we have specified, no abstract should require 2 pages, so a second page is not necessary just to provide identification.

What TO DO in an Abstract:

- Be concise. Less is usually more.
- Use one or two sentences at a time to describe:
 - Background motivation and or purpose.
 - The type of experiment you did (you can refer to the studio topic) and the equipment.
- State the result of your experiment and its relevance – this includes numerical results and uncertainties, and any unusual observations.
- Check your spelling and grammar – they do count, and your TA will thank you.

What NOT to do in an Abstract:

- State that you learned "how to write an Abstract," or "how to do an experiment," etc. – we already know this.
- Significantly exceed the word count – seriously.
- Describe in excessive detail how you did an experiment – those details would appear in Introduction or Procedure sections.
- Include any data – that goes inside an Analysis section.
- Describe the details of your calculations – save that for the Analysis section.
- Write about the subtle nuances of the experiment or any issues – save that for the Discussion section.
- Leave out the result and/or its uncertainty – both must be included for full credit.
- Violate sig fig and/or precision guidelines. Refer to MUG for details.

How to Write a Good Abstract

- We do not provide a sample Abstract on the subject of accelerated motion (the topic of Module 02), for obvious reasons. Instead, we invite you to mock-grade the Abstract found in the [Experimental Investigation of a Circle](#), the lab referred to in the Introduction above. When "grading" this Abstract, use your observations as a check on your own Abstract as you write it.
- You are allowed to ask individual questions about how to improve your Abstract before the Abstract is due. The following rubric is closely aligned to the rubric your TAs will use to score your Abstract:

Percentage	Topic
~30%	Purpose and procedure: Statement of lab objective(s) and physics principle(s) investigated. Brief summary of investigation and the equipment used.
~50%	Results: Numerical values of key results, with uncertainties and units. statement of method of uncertainty estimation. Comparison of calculated initial positions with initial positions in video.
~10%	Clarity: Is a reader able to clearly imagine what you did and what your results mean?
~10%	Conclusion and implications: Evaluation of results and any lessons learned.

How to LOSE points writing an Abstract

- Include tables of data.
- Include an excessive number of equations.
 - equations on any Abstract should be extremely limited or non-existent.
 - can you instead describe the necessary physics using only complete sentences? (the answer should be "yes, mostly if not entirely").
- Excessive detail about procedure or apparatus.
- Not submitting as pdf.
- Excessive sig fig or precision in result or uncertainty – see MUG.
- No identifying information (who are you?).

Here is what a 260-word abstract looks like, more or less. It is acceptable to structure your Abstract with the underlined headings below. You may find these headings useful for your organization and understanding, but they are not required.

Blank Abstract
Studio 12
Section 666
Dr J
Groupmates: none
Date: April 4, 2057

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