

Physics 338 Advanced Physics Laboratory

Formal Iodine Report Schedule and Guidelines

First Draft Report	Thursday, February 29, 2024 1:15 pm
Second Draft Report	Tuesday, March 19, 2024 1:15 pm
Peer Review Report	Thursday, March 21, 2024 1:15 pm
Final Report	Thursday, March 28, 2024 1:15 pm

Introduction

For the iodine experiment, you will produce a formal lab report in the style of a journal article, suitable for submission to *The American Journal of Physics*. Basic instructions on the format and structure of the article are in the lab notebook handout from the first day of class (and also available from the course web page). Since Phys 338 is a writing course, this is a significant project, ultimately worth 30% of the total course grade. As part of this project, we will spend significant class time discussing scientific writing.

Although there are specific submission milestones laid out below, you should feel free to consult with me (and with your classmates) at any time throughout the process.

Length

A typical American Journal of Physics article is approximately 4,000 to 5,000 words, plus equations, tables, and figures. You should use the preprint format for all your drafts, with `\documentclass[prb,preprint]{revtex4-1}`. In that double-spaced format, your paper will typically be about 8 to 10 pages. Typeset in the tight two-column format with `\documentclass[prb,twocolumn]{revtex4-1}`, your paper should be approximately 3 to 4 pages.

First Draft

By the beginning of class on Thursday, February 29, 2024, you should submit one paper copy of your first draft. This doesn't need to be absolutely complete, but should be very nearly so. You should have attempted to complete all of the analysis and estimated the dissociation energy. You should have all of the expected sections, though I expect some (particularly the introduction and references) may still need substantial polish and revision. The draft will be graded and count as 10% of the total score for this project, but that grade is primarily based on having a mostly complete effort at a first draft. If it is substantially incomplete, I may simply return it ungraded.

Do not wait until the night before the report is due before starting. When preparing a first draft, it is reasonably common to discover that some new or additional data is required. Allow yourself time to revisit the experiment and redo the analysis.

You may turn this draft in early! The timetables for revisions will be fairly tight, so if you want to give yourself extra time, you may turn in your first draft early, and I will get it back to you promptly.

The closer to complete your first draft is, the more useful feedback I can provide.

Second Draft

By the beginning of class on Tuesday, March 19, 2024, you should submit (*via Moodle*) an electronic copy of your second draft. This copy should not have your name on it. This is the version we will use for peer review. This should be a complete version. In a journal context, if the referees do not suggest any revisions, this would be the version that gets published. Accordingly, you should be optimistic and assume that this is your final version that you want published.

The draft will be graded and count as 20% of the total score for this project, but that grade is primarily based on having a complete effort suitable for submission. If it is substantially incomplete, I may simply return it ungraded. If you do not submit a report on time, you may not participate in the peer review process.

Peer Review Report

Published articles ought to be free of scientific error, and written in a manner that makes them clear and accessible to the target audience. To help attain that goal, articles submitted to journals usually undergo anonymous peer review. Accordingly, we will exchange papers within the class for a peer review process. Your participation in this process counts for 5% of your total course grade.

I will give you two articles to review as a referee, along with fresh copies of the reviewer guidelines. Your basic goal will be to judge whether the paper is suitable for publication in the American Journal of Physics as is, without any modifications. Specifically, you will be asked to evaluate both the scientific merit of the work and the quality and clarity of the presentation.

The reviewer guidelines are very detailed, but you do not have to answer every question or correct every mistake in an article. They are intended as much to guide you as an author as they are to guide you in your role as a referee. If a particular section (e.g. the Introduction) is fine, you may simply write something like 'The Introduction is fine' on the reviewer worksheet. If there are many issues or questions in a section, simply list the first few or the most important ones, and add a brief comment that there are others as well. In short, it was the author's responsibility to write the article; it is not your responsibility as the referee to fix it.

Please be kind and professional in your comments. Your review may be either typed or hand-written. You may write directly on the review packet, or you may simply write a fresh document. Please include the review packet cover sheet with your review. I will remove the identifying cover sheet before giving the comments back to the authors. Do not spend too much time on your review. Since you are quite familiar with the topic, I expect the entire process to only take about an hour.

Peer review reports are due in class on Thursday, March 21, 2024. As a courtesy to your fellow authors, please do not be late. Since the peer review process is time-sensitive (authors only have one week to make their revisions in this class) late peer review reports will normally not be accepted.

Final Version

Normally, if the author wishes to resubmit a paper after review, he or she must submit a revised version along with a cover letter explaining the choices made during the revisions. An author may disagree with a referee about specific changes, but must still defend those choices.

After you receive your referee reports, you should revise your paper in light of them. You will then submit your revised report and include a cover letter explaining your choices. Often, if the changes are simple or straightforward, the letter can be quite short. Please also include the review comments with your resubmittal letter.

The final version should be in final form suitable for publication. It should be in a single-spaced two-column format. If you are using the AJP L^AT_EX template, that simply means changing the `documentclass` statement near to top to `\documentclass[prb,twocolumn]{revtex4-1}`.

The resubmittal letter and final report are due at the beginning of class on Thursday, March 28, 2024. The final report will count as 70% of the total grade for this project.