NOTEBOOK CHECK-LIST. The following check-list should be used in assessing the adequacy of your lab notebook. Your instructor may use this as a notebook grading sheet.

General Requirements (checklist for student)	**Quality of Notebook Entry (grading scale for instructor)** **Unsatisfactory** **Outstanding**
➢ Bound Notebook ➢ In-lab notes (no paper scraps) taken in ink ➢ Numbered notebook pages ➢ Updated Table of Contents	
Notebook Content – Pre-lab work	
➢ Title and date ➢ Statement of experiment purpose ➢ References (journal articles or textbook) ➢ Synthetic schemes/physical constants ➢ Recommended procedure including weights/dilution procedures you will use ➢ Required equipment/schematic of set-up ➢ Pre-lab questions	
Notebook Content – In-lab work	
➢ Procedure that was actually carried out ➢ Equipment that was used, including glassware and make/model of instrumentation ➢ Measurements recorded with proper significant figures, errors, and units ➢ Observations, and where in the procedure they were made ➢ Required calculations/graphs	

LABORATORY REPORT CHECK-LIST. The following template may be used for reports in advanced Chemistry courses.

General Requirements (checklist for student)	Quality of Lab Report Section (grading scale for instructor)
	Unsatisfactory **Outstanding**
Title page ➢ Name; ➢ Number and title of the experiment; ➢ Date; ➢ Name of your professor/TA; ➢ Number of unknown sample (if applicable); ➢ Cross-reference to the lab-book page(s). **Introduction** ➢ Why are you doing the experiment? ➢ Put it in the context of what is known and what theories/models the experiment is based. **Experimental** (also called **Materials and Methods**) ➢ Fully outline what you did … do not rewrite or paraphrase the experimental handout (Indicate deviations from the handout.) ➢ Include make/model of any equipment used; ➢ Sketches of apparatus; ➢ Source, purity, lot # of reagents.	

LABORATORY REPORT CHECK-LIST (continued).

Data/Calculations (if required … instructor may also request these as an Appendix). ➢ Show your raw data, graphs/spectra recorded during the lab; ➢ Sample calculations; ➢ Include proper significant figures, measurement error, and units. **Results.** ➢ Discuss how you proceeded from your raw data through the intermediate calculations; ➢ Introduce/present *every* Table/Figure you have prepared and have shown. ➢ Graphs and Tables in proper format. **Discussion.** ➢ Provides a coherent transition from your Results through to the interpretation/final data analysis; ➢ Discuss your results in the context of appropriate literature references and/or common sense (do they make sense?). Critical analysis of the results: If you did not obtain the expected results, explain what may have happened … it is not appropriate to say "the instrument did not work … explain specifically what about the instrument may have given you an erroneous measurement; ➢ How would you improve the experiment in the future?	

LABORATORY REPORT CHECK-LIST (continued).

Conclusions. ➢ Brief, succinct concluding statements about what you accomplished; ➢ How did the experiment work? ➢ What alternative methods may be used in the future? **Bibliography/References.** ➢ List any journal articles or reference materials you cited in your lab report. Citations may be listed alphabetically by first author's last name or numbered chronologically in the order they appear. Follow your instructors guidelines. It is recommended that you use the format (pay attention to punctuation) of *The Journal of the Americal Chemical Society*.*) **Style Aspects.** ➢ Proper use of graphs/tables ➢ Flow of ideas ➢ Run-ons ➢ Clarity ➢ Punctuation ➢ Spelling ➢ Abbreviations ➢ Paragraph development and coherence ➢ Subject/verb agreement ➢ Conciseness/omit unnecessary details ➢ Logical arguments	

*Sample reference format (consult *The ACS Style Guide* for accepted reference formats and journal abbreviations): Doe, J.; Smith, J.; Jones, J. *Abbreviated Journal Name* **2003**, *100*, 1-5.