Formal Laboratory Report Format

Each student is required to write two formal laboratory reports of their own work. These reports are to be done individually and not as group work. Please refer to your course syllabus for the assigned experiments and the due dates. Please use 1.5 line spacing and 1" margins in your report.

The formal laboratory report:

The two formal reports that you will be required to write should contain the following sections:

1. Title page
2. Introduction – Provide background information to the experiment and explain why you are perform it.
3. Experimental:
    - a description written in passive voice of the procedure/equipment used to carry out the experiment.
    - Include gram and mole quantities (e.g. "benzophenone (2.0 g, 0.01 mole) was added to the reaction). Mole quantities for solvents are not necessary.
    - Yield (if it was obtained)
4. Results and Discussion:
    - State the results and observations in this section as well.
    - You can also include tables, figures, diagrams, flow charts and spectra in this section or in an appendix at the end of the report.
    - When stating the results make sure you refer to the appropriate graphs or tables.
    - This section should include the relevant (balanced) chemical reaction equations that were carried out in your experiment.
    - The discussion part of this section is by far the most important segment of your report in that it demonstrates and helps develop your critical thinking skills. It is a narrative summary of the work accomplished and includes conclusions and a description of how you arrived at your conclusions. In addition, explanations as to why certain outcomes occurred are revealed.
    - Elaborate and discuss any evidence that justifies your results (i.e. the peaks (for ^{1}H NMR) or bands (for FT-IR and UV-Vis) or stretches (for FT-IR)) seen or not seen in the spectra and any the negative or positive chemical tests you performed.
    - If the results of the experiment were unexpected: describe, elaborate and offer explanations or theories.
    - Please cite all reference and source materials (See "Reference section" and "sample report" at the end of this document).
    - Diagrams of apparatus and illustrations should be labeled correctly. If they are not created by you must be properly referenced/sourced throughout the report.

5. Conclusion:
    - Brief statement to summarize the results.
    - Explain if the original objective/aim was achieved.
    - Suggest/offer reason(s) why original objective/aim was achieved or not achieved.
6. Reference:
    - Numerical list of all reference/sources used in the report.
    - Reference or Source any materials that you use in your lab reports.
    - Materials that are not referenced/sourced will be considered plagiarized and will be considered academic dishonesty.
    - Do not claim copy or plagiarize material from your colleagues, books or the web. Diagrams of apparatus and illustrations that are not created by you must be properly referenced/sourced throughout the report.

A grading scheme is shown below.

Criteria	**Points**
Introduction	5
Experimental	5
Results and Discussion	10
Spectra	5
Figures and Chemical Equations	5
Conclusion	5
Clarity and Presentation	5
Total	40