ChE 203 Laboratory Report Format

Laboratory reports should have the following format (70% of your grade for that experiment):

(1) **Object (5%)**
   The main object of the experiment is summarized briefly.

(2) **Procedure and Apparatus (including its figure) (10%)**
   *Apparatus* section includes the figure of the experiment set-up and lists the materials used in the experiment.

   *Procedure* explains step by step how the experiment is performed. This section should be written in passive voice.

(3) **Data (10%)**
   In the report, the raw data recorded during the experiment should be given in a proper table format.

   In addition, do not forget to attach the original datasheet signed by experiment TA to your report during the submission.

(4) **Calculations (45%)**
   This section contains the calculations for the analysis of the data. The calculations need to be carried out in Microsoft Excel and Equation Editor should be used for displaying equations.

(5) **Discussion (20%)**
   Discussion is an objective interpretation of the results reported in the Calculations. The tables and figures of Calculations are discussed in detail and main conclusions, possible source of error, the reasons for the deviations between the model (theoretical) and experimental results are reported. Moreover, the validation of the assumptions, the effect of the parameters on experiment can be discussed. Suppose that in an experiment, the relation between pressure (P) and volume (V) is tested and in Calculations, P vs V data is plotted in Figure 2. In Discussion part, it can be stated that “As seen from Figure 2, pressure and volume is inversely proportional, which is an expected result according to ideal gas law”.

(6) **References (do not plagiarize!!)***
   Reference list should be given at the end of the report.
The reports must have a **cover page**, including

- Name and code of the course,
- Experiment title and number,
- Names of the group members,
- Group number,
- Name of the assistant,
- Date of the experiment,
- Submission date of the report.

Take note of margins and labeling in your graphs (see Figure 1 and 2).

![Figure 1. Incorrect margin and labeling figure example: x-axis maximum limit is incorrect, x-axis label is missing, y-axis lacks units.](image)
Figure 2. Correct margin and labeling figure example: axes are correctly labeled and units are specified.

Be careful about significant figures and scientific notation in your calculations. For example:

- Instead of 0.000002, write $2 \times 10^{-6}$.
- Instead of 123.475859606 g, write 123.5 g or 123.48 g.

Do not take printouts of excel worksheets, present everything in the document format.

Name the soft copy of the report as GroupX_expY.doc with X being the group number and Y being the experiment number and upload it to the turnitin on the day of report submission.

The proper format of the report will constitute the remaining 10% of your report grade. The groups which do not send the soft copy will get zero for the experiment.