CHEM 450/450G HW #0

Note: HW 0 is an introduction to Mastering, and will give you a dry run at submitting your work for handwritten problems (all due 8/27). All assignments have components that are done in Mastering, and components that are done by hand and then submitted in Gradescope, which you must access through the Blackboard site. All assignments are due at 11:59 pm on the due date.

When submitting hand-written work, if you do not have a scanner, please use a camera app like Camscan or Genius Scan. Ensure that your images are oriented correctly (so that I don't have to rotate images as I review work), and that work is easy to read. One of the best ways to do that (and reduce the image size) is to convert everything to "black/white" mode. Please compile everything into a single pdf and upload. One way to do that is by pasting the scanned images into a word doc and saving that as a pdf. If you do, scale your images to completely fill the available page space. Additional information is available on Gradescope's student assistance website (https://help.gradescope.com/category/cyk4ij2dwi-student-workflow) .

Reading: Chapter 1(All).

For each "Q" question, write a brief (1 to 5 sentence) paragraph that completely answers the question. Use equations or sketches as appropriate. A ***complete answer*** shows all the steps in your thinking, and uses facts (like equations, definitions, conceptual ideas) as evidence in support of that argument.

For each "P" question, show all work. You may use red equations from the text without reference, but you should show any manipulations and always state all assumptions made. Partial credit will be issued, but only if I can figure out what you have done!

Hand in: These questions are to be answered on paper and scanned, or typed. Submit them in Gradescope.

Q 1.15 (3 points)
P 1.5 (3 points)
Mastering: 4 points

Notes:

Q1.15: Whenever asked to "explain why", get at the very root of why. That typically means giving an answer in terms of molecular concepts and sometimes equations. In this case, your answer will be based in the molecular origins of pressure, and how that will be altered if the molecules have an attraction for one another.

P1.5: For all problems (P), be sure that you include your work, which means every number needs a unit on it. Always show the original equation used (i.e., PV = nRT), then rearrange to solve for the unknown (here, n = PV/RT), all done ***before*** you plug numbers in. Then, show the version with the numbers inserted, including the units for every number. At the end, place a box around all answers that are requested for that question. Note that sometimes, there is more than one question asked, so be sure to answer all of them!

Practice: Normally, there are practice problems that have solutions in Blackboard.