Chemistry 101
Unit 8 – Outcomes

The student will be able to:

1) Identify characteristic properties of gases.

2) Identify 5 main features of the Ideal Gas Model.

3) Explain or predict physical phenomena relating to gases in terms of the Ideal Gas Model.

4) Define the term "pressure."

5) Describe the devices used to measure gas pressure.

6) Recognize units of pressure measurement:
- mm Hg
- atm
- torr

7) Given a gas pressure in atmospheres, torr, mm of Hg, express that pressure in each of the other units.

8) Define the term "temperature."

9) Define "Absolute Zero."

10) Given a temperature value in either degrees Kelvin or Celsius, calculate the other.

11) Identify the symbol STP.

12) List the values of STP.

13) Describe the relationship between the volume of a gas and temperature.

14) Describe the relationship between the pressure of a gas and temperature.

15) Describe the relationship between the volume of a gas and pressure.

16) Given the initial pressure (or temperature) and initial and final temperatures (or pressures) of a fixed quantity of gas at constant volume, calculate the final pressure (or temperature).

17) Given the initial volume (or temperature) and initial and final temperatures (or volumes) of a fixed quantity of gas at constant pressure, calculate the final volume (or temperature).

18) Given the initial volume (or pressure) and initial and final pressures (or volumes) of a fixed quantity of gas at constant temperature, calculate the final volume (or pressure).

19) For a fixed quantity of a confined gas, given the initial volume, pressure, and temperature and the final values of any two conditions, calculate the final value of the third condition. (Initial or final conditions may be standard temperature and pressure, STP).