

**Teaching and Learning Objectives of Week 3**

1. Define, Illustrate, and Compare and Contrast the following terms and concepts:

## Pressure Distribution in Inviscid Moving Fluids

Pressure distribution *along a streamline* — Bernoulli Equation

Pressure form vs head form vs energy form

Static vs. Dynamic (Kinetic) vs. Gravitational (hydrostatic) Pressure

Stagnation point

Static vs. stagnation pressure (operation of a Pitot-Static tube)

Pressure distribution *across parallel streamlines*Pressure at a submerged exit, *i.e.* a point where a flowing fluid enters a much larger body of fluid, exit-plane pressure of a jet

2. List the assumptions/limitations of the *Bernoulli Equation*. Explain the limitations upon the use of the Bernoulli equation
3. Apply the Bernoulli equation along a streamline in an incompressible, frictionless flow to predict how static pressure, velocity, and elevation change along the streamline in both internal and external flows. Specific applications include but are not limited to determining (a) the pressure at a stagnation point and (b) the pressure and/or velocity at the exit of a large reservoir