

## ME 121: Homework 1

Due 4 April 2016

### Group Assignment

Paint the wooden portion of your fish tank system that was fabricated in class 1. Have fun with your paint scheme . . . the way it looks is up to you.

### Individual Assignment

1. Make hand sketches and measurements of the PVC tank. Include enough dimensions that you can create accurate solid models of the parts.
  - a. Use the hand sketches to create solid models (in SolidWorks) of the PVC fish tank parts. They should be the endcap (with bottom hole), the tube (with both holes), and the barbed fittings. You do not need to model the threads.
  - b. Use the part models to create an assembly of the fish tank.
  - c. Include pictures of at least two views of the SolidWorks fish tank assembly in your homework.
2. Assume the depth of water in the PVC pipe that you are using for the fish tank reservoir is five cm. Compute the volume of water in this chamber in mL.
3. How much salt (in grams) must be added to a two liter bottle of pure water to make the resulting mixture 0.035 percent salt by weight?